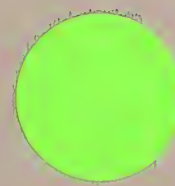




THE 1987 PHYSICIANS' PRACTICE  
FOLLOW-UP SURVEY

Executive Summary

June 30, 1988



**HEALTH ECONOMICS RESEARCH, INC.**





HEALTH ECONOMICS RESEARCH, INC.

Hillsite Office Building  
75 Second Avenue, Suite 100 • Needham, MA 02194 • (617) 444-8910

THE 1987 PHYSICIANS' PRACTICE  
FOLLOW-UP SURVEY

Executive Summary

June 30, 1988

Submitted by:

Margo L. Rosenbach, Ph.D., Project Director  
Janet B. Mitchell, Ph.D.  
Jerry Cromwell, Ph.D.  
Sylvia Hurdle, M.A.  
Brooke Harrow, B.A.  
Ashley Stone, B.A.

Health Economics Research, Inc.  
75 Second Avenue, Suite 100  
Needham, MA 02194

to:

National Opinion Research Center  
1155 East 60th Street  
Chicago, IL 60637

This research was supported by HHS Contract No. 100-86-0023 cosponsored by the Assistant Secretary for Planning and Evaluation and Health Care Financing Administration, Sharman Stephens and Deborah Williams, government project officers. The work was performed under subcontract to NORC. The views and opinions expressed in this report are the subcontractor's and no endorsement by ASPE, HCFA, or DHHS is intended or should be inferred.







ACKNOWLEDGMENTS

This Executive Summary presents the results of four separate research efforts based on the 1987 Physicians' Practice Follow-up Survey. Numerous individuals from the Federal Government reviewed and commented on our work and we appreciate their suggestions. In particular, we acknowledge the contributions of Chris Bladen (malpractice insurance), Ira Burney (Medicare participation), and George Greenberg (mispriced procedures). Our co-project officers, Sharman Stephens (ASPE) and Deborah Williams (HCFA) devoted considerable energy to assuring that our research was useful and intelligible to policymakers, and in the process enhanced the overall quality of our work.

The NORC survey team, led by Eve Weinberg and Sofi Roden, conducted this most difficult survey of physicians and we thank them for their assistance in responding to various survey-related questions.

Our two consultants were invaluable. William Stason, M.D., was a major contributor to our study on mispriced procedures. From the beginning, he provided suggestions on questionnaire wording, procedure selection, and interview strategies. During the analytic phase he guided us on the interpretation and face validity of our results. Ken Jones, Ph.D., provided statistical consultation on the reliability of time and complexity data on our mispriced procedure study. Moreover, he planted the seed for our regression methodology.

Computer programming was performed by Rebecca Berman and Edward Karl. We are indebted to them for their support and their mastery of this complex data base.

Finally, we thank our administrative staff, for their painstaking attention to detail, and their commitment to meeting deliverable dates, even in the face of a blizzard.

MLR

JBM

JC

SH

BH

AS





TABLE OF CONTENTS

	<u>PAGE</u>
1.0 OVERVIEW OF THE 1987 PHYSICIANS' PRACTICE FOLLOW-UP SURVEY	1-1
1.1 Research Area	1-1
1.2 Sample Design and Response Rates	1-2
1.3 Organization of Executive Summary	1-3
2.0 USING RELATIVE PHYSICIAN EFFORT TO IDENTIFY MISPRICED PROCEDURES	2-1
2.1 Motivation	2-1
2.2 Methods	2-2
2.2.1 Time and Complexity Estimates	2-2
2.2.2 Fee Data	2-3
2.2.3 Statistical Analysis	2-3
2.3 Summary of Findings	2-4
2.3.1 Time and Complexity Estimates	2-4
2.3.2 Fee Equations	2-6
2.3.3 Predicted Medicare Payments for Surgical Specialists	2-9
2.3.4 Predicted Payments for Medical Specialists and Radiologists	2-12
2.4 Implications for Over and Underpaid Physician Services	2-12
3.0 SURGEONS' BILLING PRACTICES FOR SELECTED SURGICAL PROCEDURES	3-1
3.1 Motivation	3-1
3.2 Summary of Findings	3-1
3.2.1 Composition of Global Surgical Bills	3-1
3.2.2 Comparison of Post-Hospital Office Visits: 1982-1987	3-5
4.0 IMPACT OF MALPRACTICE INSURANCE COSTS ON PHYSICIAN PRACTICE, 1983-1986	
4.1 Motivation	4-1
4.2 Summary of Findings	4-2
5.0 TRENDS IN MEDICARE PARTICIPATION AND ASSIGNMENT RATES, 1984-1987	5-1
5.1 Motivation	5-1
5.2 Summary of Findings	5-2

## REFERENCES

## APPENDIX A SURVEY INSTRUMENT



## 1.0 OVERVIEW OF THE 1987 PHYSICIANS' PRACTICE FOLLOW-UP SURVEY

### 1.1 Research Area

The 1987 Physicians' Practice Follow-up Survey was sponsored jointly by the Assistant Secretary for Planning and Evaluation (ASPE) and the Health Care Financing Administration (HCFA) and was designed to address several high priority health policy issues. Physicians participating in the 1983 Physicians' Practice Costs and Income Survey, also sponsored by HCFA, were recontacted in 1987 to take part in the follow-up survey. The following research areas were addressed:

- Appropriateness of Current Medicare Payments Relative to Physician Effort
- Composition of Global Surgical Bills
- Medical Malpractice Costs
- Medicare Physician Participation

The first research area involved gathering data on the time and complexity involved in performing selected high volume, high dollar Medicare procedures and examining the relationship between physician effort (i.e., time and complexity) and Medicare payments. The intent was to determine the appropriateness of current Medicare payments and assess which procedures may be mispriced relative to physician effort, either over- or underpaid.

The second study examined variations in physicians' billing practices for selected surgical procedures. How frequently do surgeons' global surgical fees include post-hospital office visits as well as the pre-operative office visit in which the decision to operate is made? This study has implications for our work on the appropriateness of current Medicare payments, suggesting that measures of physician effort should take into account the time spent providing pre- and post-operative care.

The next topic concerned the level of malpractice insurance premium increases from 1983 to 1986, both in absolute terms and relative to gross incomes. Are physicians as a group facing a malpractice insurance "crisis," or have some specialties been disproportionately affected? In addition, the study assessed whether malpractice insurance limits have changed from 1983 to 1986 and whether physicians have changed their practice patterns due to rising insurance costs (either refusing to perform certain procedures or treat certain cases).



Finally, we examined changes in the Medicare participation program over time. At the time the survey was conducted, four sign-up periods had taken place. Have participation rates risen over time, in response to the incentives of the program? Moreover, what motivates physicians' decisions to sign or not to sign or to change their decision?

## 1.2 Sample Design and Response Rates

The sample design of the 1987 Physicians' Practice Follow-up Survey is a function of the design of the 1983 Physicians' Practice Costs and Income Survey. For this reason, we review the original survey design in addition to the design of the follow-up survey. The original 1983 sampling frame was the list of 331,264 physicians contained in the 1984 Physician Master File and maintained by the American Medical Association.

The target population of the original survey included physicians meeting the following criteria:

- in active practice at the time of interview, providing patient care at least 20 hours per week in an office-based or hospital-based setting (excluding residents, full-time faculty members, and research fellows);
- engaged in patient care during some part of calendar year 1983;
- not employed by the Federal Government;
- practicing in the 50 United States and the District of Columbia (but excluding the U.S. territories); and
- belonging to a recognized medical specialty, excluding osteopaths, chiropractors, dentists, and limited license physicians.

NORC used a single stage, stratified element level, random sampling design based on 136 discrete strata that were defined in three basic dimensions: Specialty, Geographic Region, and Degree of Urbanization. Of the 8,954 physicians eligible for the 1983 PPCIS, 4,729 (67.6%) completed the survey, with wide variation in completion rates by specialty.

Only those physicians who completed the original survey were contacted for the follow-up survey. Excluding pediatricians, pathologists, psychiatrists, and quite a few other small medical specialties, yielded a potential sample of 3,554 for the follow-up survey.

The eligibility requirements were not as stringent for the follow-up survey as for the original one. Basically, only physicians not providing at least 20 hours of patient care a week for six months during 1986 were





excluded. This generally eliminated physicians who had retired or who had switched from providing patient care to teaching or research. Of the original 3,554 physicians contacted, 186 were considered "out-of-scope" or ineligible for the follow-up survey (see column 2 of Table 1-1). In addition to ineligible physicians, another 879 refused to complete the follow-up survey, yielding a final sample size of 2,499 and an overall completion rate of 74.2 percent.

As in the original survey, completion rates vary widely among specialties (see Table 1-1). Radiologists and anesthesiologists had the highest rates (83% and 82%, respectively) and cardiologists, the lowest (57.4%). In general, completion rates in the follow-up survey were only slightly higher than those of the original survey.

### 1.3 Organization of Executive Summary

This executive summary provides an overview of the results of the 1987 Physicians' Practice Follow-up Survey. Section 2 describes the relationship between physician effort and Medicare payments. Section 3 describes the composition of global surgical bills. Section 4 examines the extent to which malpractice insurance premiums have increased from 1983 to 1986 and the impact on physician practice patterns. Section 5 discusses the level of physician participation in Medicare across the four sign-up periods from October 1984 to January 1987. Each of these four topic areas has been studied in detail and each analysis is presented in a separate report. Further details about the studies are available in their respective reports. Finally, Appendix A includes a copy of the questionnaire.





TABLE 1-1

## COMPLETION RATES BY SPECIALTY

<u>Specialty</u>	<u>1987 Original Sample</u>	<u>Out-of-Scope<sup>a</sup></u>	<u>Net Sample</u>	<u>1987 Completion Rate</u>
TOTAL	3,554	186	2,499	74.2
General Practitioners	232	16	174	80.6
Family Practitioners	469	35	334	77.0
Cardiologists	159	4	89	57.4
General Surgeons (includes other surgery)	263	20	179	73.7
Orthopedic Surgeons	162	4	104	65.8
Obstetricians/Gynecologists	286	8	205	73.7
Cardiovascular/Thoracic Surgeons	43	3	25	62.5
Anesthesiologists	329	17	256	82.1
Neurologists	49	2	36	76.6
Dermatologists	46	2	26	59.1
Plastic Surgeons	45	0	34	86.9
Gastroenterologists	52	0	37	71.2
Urologists	185	5	125	69.4
Ear/Nose/Throat Surgeons	72	4	48	70.6
Neurological Surgeons	31	0	24	77.4
Radiologists	326	26	250	83.3
Ophthalmologists	162	9	104	68.0
Internists (includes other medical)	643	31	449	73.4

<sup>a</sup>Physicians were designated "out-of-scope" if they no longer provided 20 hours of patient care a week during at least six months of 1986.

Source: 1987 Physicians' Practice Follow-up Survey.



## 2.0 USING RELATIVE PHYSICIAN EFFORT TO IDENTIFY MISPRICED PROCEDURES

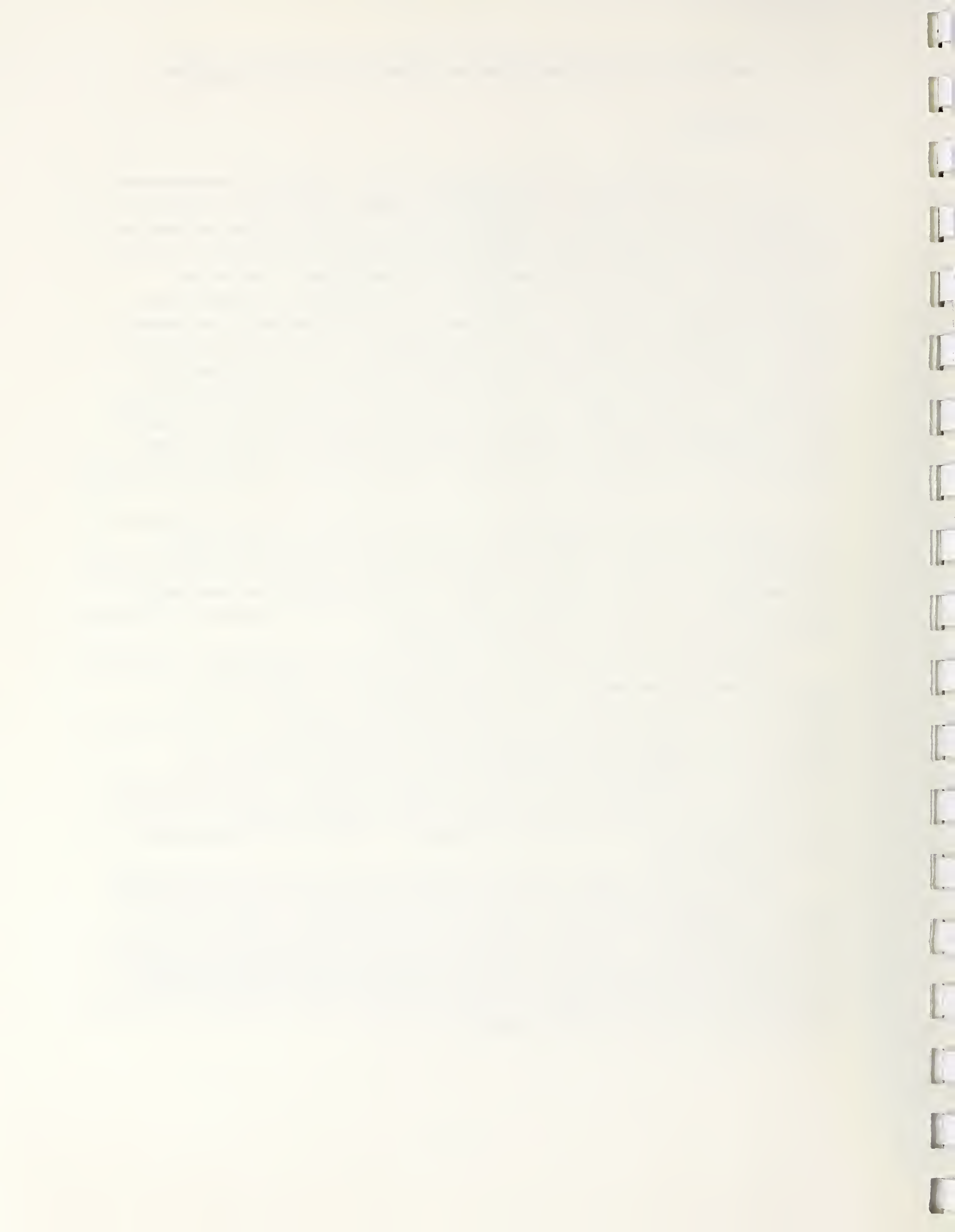
### 2.1 Motivation

Critics have argued that the current method of Medicare reimbursement "overpays" certain surgical procedures (CBO, 1986; OTA, 1986). Coronary artery bypass graft (CABG) and cataract surgery are often cited as examples. Technological improvements and greater experience have reduced the time and effort required by surgeons to perform these operations. The "usual, customary, and reasonable" (UCR) method used by Medicare and many private insurers, however, provides no mechanism for readjusting physician payment rates to reflect the greater ease of performance. At the same time, other critics have argued that certain non-surgical services, like office and hospital visits, may be paid too little (Hsiao and Stason, 1979; Hsiao, et al., 1985). Based on these concerns, Congress has already begun to reduce Medicare payment levels for selected surgical operations and to increase reimbursements for primary care services (Omnibus Budget Reconciliation Act of 1987).

The question remains, however: how do we identify which procedures are "overpaid" and which are "underpaid"? One way involves indexing other procedures and services to an "appropriately paid" procedure in terms of time and complexity (Mitchell, et al., 1987a). Which procedure is considered appropriately paid is certainly debatable, and the results appear to be quite sensitive to the choice of the "index procedure."

Another way is to quantify the existing relationship between physician effort (time and complexity) and average payments for a wide range of services. If many services are paid appropriately relative to level of effort, then a regression model that uses physician effort to explain actual payments should have good explanatory power and should identify the "outliers", or "mispriced" procedures. Although the use of fee regressions cannot be used to affirm absolute price levels, examining relative levels is an important first step in adjusting payments within the existing payment system, nonetheless.

Because of the unique features of the data and statistical technique employed in this analysis, we first describe our methods. Next, we present national estimates of Medicare fees, time, and relative complexity for selected medical and surgical procedures. We then use multivariate analysis to determine the association of time and complexity with fees. Based on estimated fee-effort equations, outlier procedures are identified as potential candidates for higher or lower payment.



## 2.2 Methods

### 2.2.1 Time and Complexity Estimates

Each physician was asked to provide information on the time associated with 10-15 services performed by the specialty. The list of services varied by specialty. (Refer to Appendix B for a list of procedures by specialty.) Time was defined as that required to perform the service in a typical patient in each physician's practice including, where applicable, pre-operative, post-operative, and post-discharge times.

Each physician was also asked to rank the list of services according to complexity on a scale of 1 to 100, regardless of whether or not they personally performed the procedure. A score of 100 was assigned to the most complex service on the list and all other services were ranked relative to this one.

Mean time and complexity estimates were calculated only for physicians who reported that they performed the procedure at least once a month because we were concerned that physicians who performed the procedure less frequently would not be able to provide accurate estimates. Two exceptions were made in the case of routine chest x-rays for dermatologists and neurologists. Because so few neurologists interpreted chest x-rays on a monthly basis, we accepted data from infrequent performers as well, and because no dermatologists regularly interpreted x-rays, average responses for internists were used instead.

Before performing cross-specialty analyses, complexity estimates were standardized across specialties. Interpretation and report of a chest x-ray was used for this purpose since this procedure was asked of each specialty and because its content was believed to be more standard and familiar to physicians than an office or hospital visit or surgical procedure. Each complexity score for a specialty was divided by that specialty's chest x-ray score. The resulting scores thus rank complexity relative to that for chest x-ray interpretation within each specialty, and the complexity score for a chest x-ray is 1.0 for each specialty.

By design, there was considerable overlap in the procedure lists for each specialty. Both general and thoracic surgeons were asked to report on pacemaker insertion, for example, and internists shared certain endoscopies in common with gastroenterologists. To perform the multivariate analysis (described below), we aggregated common procedures among medical and surgical specialists separately to produce one observation per procedure. Mean times and standardized complexity values were combined for these common procedures, weighting by the relative frequencies of performance by specialty (as reflected in the Medicare claims data base). Aggregation was not done for visits and consultations, however, as it is widely believed that they represent fundamentally different services when performed by different specialties.





### 2.2.2 Fee Data

Physician fees were proxied by national average Medicare allowed charges obtained from the 1985 BMAD Beneficiary File maintained by the Health Care Financing Administration. This file contains all claims submitted by a five percent random sample of Medicare beneficiaries for calendar year 1985. Mean allowed charges were calculated for each service and procedure included in the study, weighted by the relative frequencies of performance by specialty.

### 2.2.3 Statistical Analysis

Time and complexity estimates derived from survey responses need to be combined in some fashion to produce a predicted fee. In previous research, one of the authors used a simple multiplicative model in developing a resource-based index (Hsiao and Stason, 1979). This implicitly assumes that effort doubles when either time or complexity doubles. Actual physician charges may or may not follow such a rule, and a more general formulation would be

$$f_i = A * T_i^{\alpha} * C_i^{\phi}$$

where  $f_i$  = the average allowed charge for the  $i$ -th procedure,  $T_i$  = average time,  $C_i$  = average complexity, and  $A$  = a base fee for a hypothetical procedure taking one minute at unit complexity. If the exponents,  $\alpha$  and  $\phi$ , were estimated to be less than 1.0, then fees would rise more slowly than under the simple model which assumes one-for-one percentage increases. On the other hand, if physicians tend to compress the scale on which they report simple versus complex procedures, the  $\phi$  complexity coefficient could exceed 1.0, and fees would rise faster percentagewise than reported complexity (Chiang, 1974). This adds a flexibility that compensates for systematic under- or over-reporting of complexity which is missing from a simple model.

Two important modifications were made to the predicting equation. First, the sum of pre- and post-operative times was treated as a separate variable with its own exponent. If pre and post-operative times are ignored, their effects will produce an upward bias in the true procedure time and complexity coefficients. On the other hand, if pre/post time is combined with procedure time, this implicitly assumes that it has the same marginal value (in terms of fees) that procedure time does. Although it is reasonable to expect physician fees to rise with more pre/post time, they should do so at a slower rate than the more "valuable," more "complex" procedure time.

As a second modification, a multiplicative dummy variable was included to distinguish surgical from medical procedures. (The variable was set equal to 2 for an invasive diagnostic or therapeutic surgical procedure; otherwise it equalled 1.) If no surgical adjustment is made, one implicitly assumes





that all procedures fall on the same time and complexity curve. This could result in a whole class of surgical procedures appearing overpriced. Patients' perceptions of the value of surgery, reinforced by broader and deeper insurance coverage, could explain systematically higher fees for surgical procedures. Whether the effects of insurance coverage should be reflected in the fees is debatable, however, and we present the results with and without the adjustment.

The multiplicative model was estimated separately in double-log form using least squares regression on 94 procedures reported by surgeons and 64 procedures reported by medical specialists (and radiologists)\*. The two groups were estimated separately under the assumption that they were reporting x-rays and other procedures along a very different complexity scale. This assumption is borne out in the empirical work. Surgeons, for example, may view brain surgery as ten times more complex per minute than interpreting an x-ray, yet the fee difference could be 100-fold. Cardiologists, by contrast, may view heart catheterization as four times more complex than an x-ray but charge only ten times more, not forty, because their subjective complexity scale is less compressed than the surgeon's.

Predicted values from the separate surgical and medical regressions were compared with actual fees to identify over- and underpriced procedures. As predicted values from a logged equation will under-predict fees depending on the explanatory power of the equation, all values were adjusted upwards using a formula developed by the staff at the RAND Corporation (Duan, et al., 1982).

A 95 percent confidence interval was constructed around the adjusted predicted fee that indicates the potential error in the predicted value (Kmenta, 1971). Actual fees falling within this band may not involve over- or underpayments if the true predicted value were at the low or high end of the interval.

## 2.3 Summary of Findings

### 2.3.1 Time and Complexity Estimates

Table 2-1 presents data for twenty selected services and procedures performed by surgical specialists. Three measures of time are shown for surgical procedures: procedure (skin-to-skin) time; inhospital pre-operative time, and post-operative time, both inhospital and following discharge. We

---

\*Anesthesiologists are excluded since all reported time estimates were based on the physician personally performing each procedure. However, Medicare pays differentially when anesthesiologists perform the complete procedure from when they medically direct Certified Registered Nurse Anesthetists (CRNAs). Unfortunately, this distinction cannot be reliably determined from claims data.



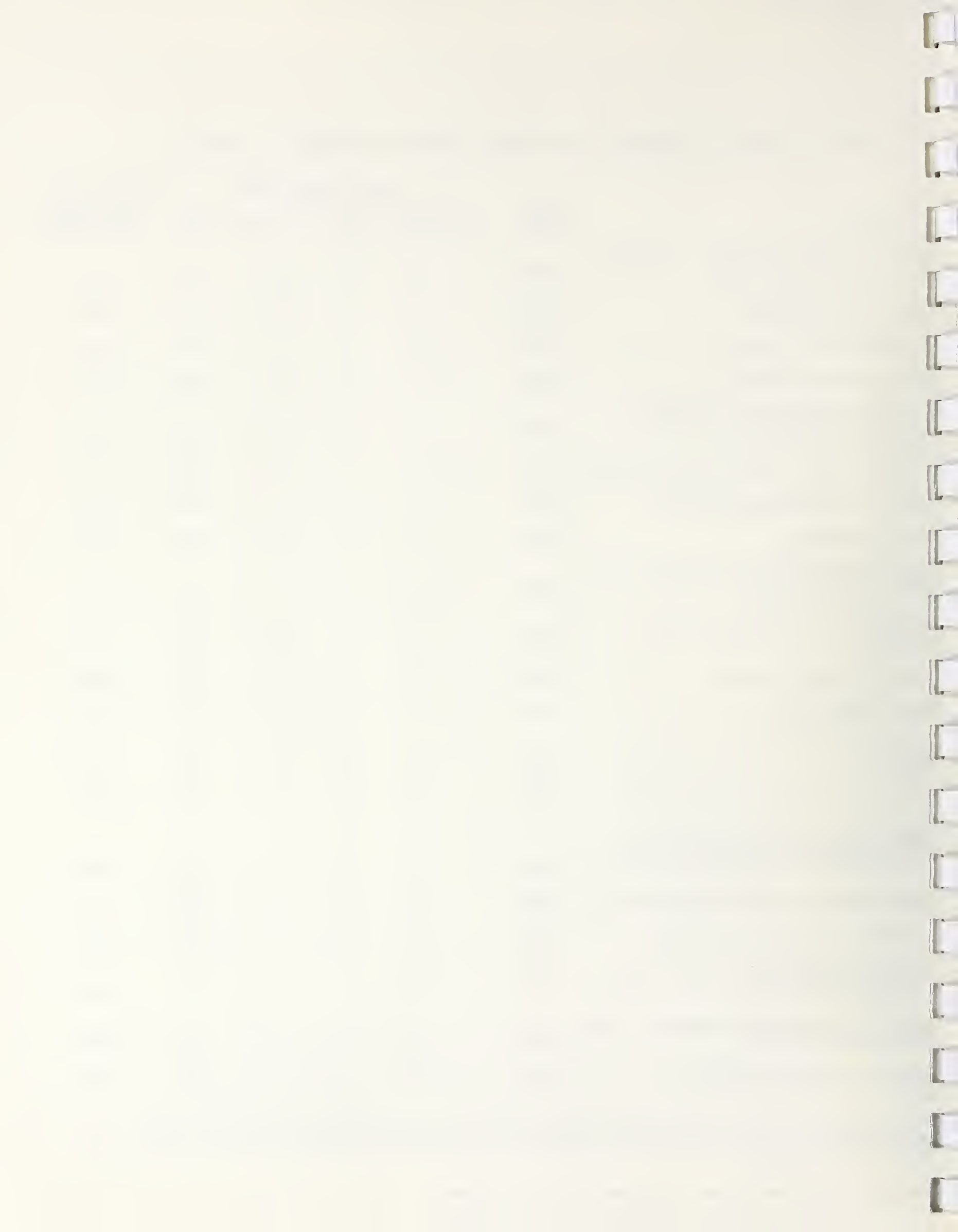
TABLE 2-1

## MEAN TIME AND COMPLEXITY ESTIMATES FOR SELECTED SERVICES PERFORMED BY SURGEONS

Description	CPT-4 Code	TIME (IN MINUTES)				Standardized Procedure Complexity <sup>a</sup>
		Procedure	Preop	Postop	Total	
Adjacent tissue transfer: eyelids, nose, ears, and/or lips	14060	80	25	106	211	2.41
Total hip replacement	27130	127	42	208	377	4.78
Secondary hip revision	27135	183	43	241	467	6.94
Total knee replacement	27447	121	40	203	364	5.53
Permanent transvenous pacemaker insertion; ventricular	33207	66	50	105	221	1.61
Coronary artery bypass; three grafts	33512	221	63	272	556	5.10
Carotid thromboendarterectomy	35301	96	69	134	299	6.18
Cholecystectomy	47600	75	46	144	265	4.91
Cystourethroscopy with resection of small bladder tumor	52234	38	--	--	38	1.94
Transurethral resection of the prostate	52601	68	43	159	270	3.32
Biopsy of cervix (cone)	57520	18	--	--	18	1.02
Total hysterectomy	58150	91	32	138	261	3.62
Craniectomy for excision of brain tumor	61510	216	118	331	665	8.56
Extraction of lens; extracapsular	66940	48	41	149	238	5.77
Extracapsular cataract removal with insertion of intraocular lens prosthesis (one stage procedure)	66984	56	32	144	232	6.87
Tympanoplasty without mastoidectomy	69631	91	33	116	240	1.91
Ophthalmic ultrasound; A-mode	76516	21	--	--	21	2.25
Initial comprehensive office visit for general surgeon	90020	37	--	--	37	1.93
Initial comprehensive hospital visit for general surgeon	90220	42	--	--	42	2.18
Swan-Ganz catheterization	93503	22	--	--	22	1.36

<sup>a</sup>Raw complexity scores have been standardized across specialties by dividing each complexity score by the specialty's score for interpretation and report of a chest x-ray. See text for details.

Source: 1987 Physicians' Practice Follow-up Survey.





assume all three times are included in the global fee. For nonsurgical services, only the time actually spent performing the service was collected. Table 2-1 also presents the mean standardized complexity score for each service and procedure, ignoring the complexity of the pre and post-operative times. Table 2-2 presents similar data for medical specialists and radiologists. Comparable data on services and procedures not shown in Tables 2-1 and 2-2 are available in the Final Report.

Average time and complexity scores were internally consistent and had face validity. Initial office visits were rated as longer and more complex than follow-up visits, for example, and original hip replacements were considered less time-consuming and less complicated than procedures involving revisions of previous hip arthroplasty.

Furthermore, there was a high level of agreement among physicians in the time and complexity values they assigned to each procedure. Intraclass correlation coefficients for service/procedure time ranged from 0.42 to 0.91, with coefficients from 13 of the 17 specialties greater than 0.60 (Guilford, 1973). Comparable correlation coefficients for complexity ranged from 0.43 to 0.83, with those for 10 specialties at 0.60 or higher. There was considerably more variability in self-reports of pre- and post-operative time, especially for ophthalmologists and orthopedic surgeons. This may be due to practice pattern differences, including differences in the location of care (e.g., inpatient versus outpatient).

### 2.3.2 Fee Equations

Table 2-3 presents the estimated coefficients using all procedures and services for medical and surgical specialists separately, each with and without a surgical adjustment. The coefficient can be interpreted as the percentage effect on fees of a 1 percent increase in either time or complexity. For example, a 1 percent increase in procedure time results in a .51 percent increase in fees according to column 1. No pre/post time coefficients are reported in the medical specialists' equations because only a few procedures (e.g., ventricular and AV sequential pacemakers) involved such times; their pre/post times were added to procedure time. Explanatory power ranges from 65 to 91 percent, and all included variables are highly significant, both statistically and in terms of their marginal effect on payments. This confirms the hypothesis that physician fees in general are strongly related to reported time and complexity, particularly for surgeons.

Without controlling for surgery (cols. 1 and 3), procedure-specific time and complexity coefficients individually are less than 1.0 but sum to more than 1.0, i.e., 1.47 for medical specialists versus 1.13 for surgeons. Thus, a doubling of time and complexity (ignoring pre/post time for now) results in somewhat more than a doubling of fees, but certainly less than the quadrupling of fees imposed by a simple multiplicative model.



TABLE 2-2

MEAN TIME AND COMPLEXITY ESTIMATES FOR SERVICES PERFORMED BY MEDICAL SPECIALISTS AND RADIOLOGISTS

Description	CPT-4 Code	Time (in minutes)	Standardized Complexity*
Skin biopsy	11100	14	1.77
Excision of benign lesion, trunk, arms, or legs; lesion 1.1 to 2.0 cm	11402	29	2.08
Diagnostic upper GI endoscopy	43235	28	2.24
Upper GI endoscopy with biopsy	43239	31	2.40
Complete skull x-ray, interpretation and report	70260	6	0.99
Chest x-ray, single view, interpretation and report	71010	4	0.91
Chest x-ray, two views, interpretation and report	71020	5	1.00
Upper GI series interpretation and report	74240	12	1.34
Cholecystography, oral contrast; interpretation and report	74290	9	0.85
Initial comprehensive office visit for general practitioner	90020	39	2.06
Initial comprehensive office visit for internist	90020	54	2.42
Initial comprehensive office visit for cardiologist	90020	55	2.19
Follow-up intermediate office visit for internist	90060	23	1.31
Initial comprehensive hospital visit for internist	90220	58	2.57
Initial comprehensive consultation for internist	90620	59	2.70
ECG interpretation and report	93010	6	0.95
Echocardiography, real time	93307	27	2.12
Combined left heart catheterization with angiography	93547	53	3.50
Combined right and left heart catheterization with angiography	93549	74	3.98
EEG (awake, asleep, and drowsy) interpretation and report	95819	14	1.89

\*Raw complexity scores have been standardized across specialties by dividing each complexity score by the specialty's score for interpretation and report of a chest x-ray. See text for details.

Source: 1987 Physicians' Practice Follow-up Survey.





TABLE 2-3

## ASSOCIATION OF TIME AND COMPLEXITY WITH 1985 MEDICARE ALLOWED CHARGES

	<u>Medical Specialists</u>		<u>Surgical Specialists</u>	
	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>
Logarithm of procedure time	.51* (.16)	.55* (.13)	.66* (.14)	.59* (.11)
Logarithm of pre/post time	--	--	.29* (.04)	.18* (.04)
Logarithm of complexity	.96* (.32)	.55# (.26)	.47* (.15)	.54* (.12)
Logarithm of surgery dummy (= 1 or 2)	--	1.34* (.21)	--	1.47* (.19)
Intercept	1.75* (.38)	1.64* (.30)	1.86* (.43)	1.64* (.33)
-----				
R <sup>2</sup> adjusted	.65	.79	.86	.91
F	62.4*	82.7*	185.2*	246.0*

\*P ≤ .01.

#P ≤ .05.

Standard errors in parentheses.

Note: Coefficients for time and complexity can be interpreted as the percent increase in charges associated with a 1 percent increase in time or complexity. Coefficients of the surgical dummy and the intercept can be evaluated as exponents of 2 or the base of the natural log, e, respectively. In equation (2), for example, a surgical procedure is  $2^{1.34} = 2.5$  times more expensive than a medical service. The intercept coefficient in equation (2) implies that a medical service of complexity = 1 involving 1 minute of procedure and pre/post time would cost  $e^{1.64} = \$5.16$ .

Source: 1987 Physicians' Practice Follow-up Survey.



When the surgery dummy is included, time and complexity effects rise or fall depending on specialty group (see cols. 2 and 4). The complexity effect is nearly halved for medical specialists and is raised slightly among surgeons. This implies that medical specialists tend to view surgery as relatively more complex than do surgeons. Procedure time and complexity coefficients become almost identical in the medical and surgical specialist equations when surgery is controlled for (ranging between .54 and .59). A doubling of procedure time, holding complexity and pre/post time constant, results in a 40-50 percent increase in fees, not 100 percent. A doubling of both time and complexity, however, produces slightly more than a doubling of fees. As indicated above, this is far less than the quadrupling of fees that would occur in a simple multiplicative model.

For every minute in the operating room, surgeons report spending roughly two minutes in pre and post-operative care. Adjusting for pre/post time separately in the surgeon's equation results in a statistically significant coefficient ( $p < .01$ ) approximately one-third the size of the coefficient for procedure time (col. 4, Table 2-3). Evaluating the surgeon's pre/post time at a lower marginal rate has a decided effect on whether certain procedures are considered outliers or not, as shown below.

### 2.3.3 Predicted Medicare Payments for Surgical Specialists

Table 2-4 compares actual 1985 Medicare payments for the same 20 procedures shown in Table 1 for surgical specialists with predicted payments based on time and complexity alone (col. 2). These procedures and services cover most specialties and highlight both short and long, complex and simple activities. The 95 percent confidence limits are shown beneath each predicted payment. (The predicted payments do not lie precisely between the upper and lower confidence limits due to the log-normal distribution of the charge data.) Column 3 makes similar comparisons, but here predicted payments have been based not only on time and complexity, but also on the surgical adjustment. Actual payments that are substantially above the predicted payment imply that this service or procedure is "overpaid" relative to the physician effort involved, particularly if it is also above the upper confidence limit. Where current reimbursement levels are below predicted payments (and below the lower confidence limit), we can infer that the service or procedure is potentially "underpaid".

Based on a time and complexity adjustment alone, office and hospital visit reimbursement for general surgeons would more or less triple, which is consistent with the relatively high time and complexity estimates assigned to these services (recall Table 2-1). Consider, for example, the initial office visit and a cystourethroscopy with resection of a small bladder tumor. Both are reported to be of equal complexity and to take equal amounts of time to



TABLE 2-4

ACTUAL AND PREDICTED 1985 MEDICARE ALLOWED CHARGES FOR SURGICAL SPECIALISTS<sup>a</sup>

Description	Actual Allowed Charge	Predicted Amount without Surgical Adj. <sup>b</sup>	Predicted Amount with Surgical Adj. <sup>c</sup>
Adjacent tissue transfer: eyelids, nose, ears and/or lips	\$524	\$876 (\$694-\$1,104)	\$815 (\$681-\$976)
Total hip replacement	2,252	2,080 (1,643-2,634)	1,769 (1,474-2,124)
Secondary hip revision	2,271	3,189 (2,399-4,239)	2,686 (2,155-3,349)
Total knee replacement	2,196	2,034 (1,641-2,522)	1,827 (1,546-2,158)
Permanent transvenous pacemaker insertion; ventricular	1,058	734 (518-1,038)	632 (483-827)
Coronary artery bypass; three grafts	3,714	3,228 (2,348-4,437)	2,575 (2,011-3,297)
Carotid thromboendar- terectomy	1,497	1,739 (1,392-2,172)	1,634 (1,375-1,941)
Cholecystectomy	798	1,308 (1,061-1,612)	1,239 (1,053-1,458)
Cystourethroscopy with resection of small bladder tumor	322	132 (106-163)	212 (169-265)
Transurethral resection of the prostate	1,038	1,040 (839-1,288)	959 (812-1,133)
Biopsy of cervix (cone)	264	54 (44-65)	87 (70-102)
Total hysterectomy	922	1,325 (1,070-1,640)	1,182 (1,002-1,394)
Craniectomy for excision of brain tumor	2,098	4,344 (3,249-5,809)	3,620 (2,886-4,540)
Extraction of lens; extracapsular	978	1,188 (860-1,641)	1,126 (876-1,447)
Extracapsular cataract removal with insertion of intraocular lens prosthesis (one stage procedure)	1,546	1,391 (1,007-1,921)	1,333 (1,038-1,714)
Tympanoplasty without mastoidectomy	1,135	894 (663-1,205)	798 (633-1,007)
Ophthalmic ultrasound; A-mode	133	86 (68-110)	53 (43-65)
Initial comprehensive office visit for general surgeon	38	130 (105-161)	69 (56-85)
Initial comprehensive hospital visit for general surgeon	51	147 (116-186)	79 (63-98)
Swan-Ganz catheterization	245	70 (59-84)	115 (94-102)

a

95 percent confidence limits in parentheses.

b

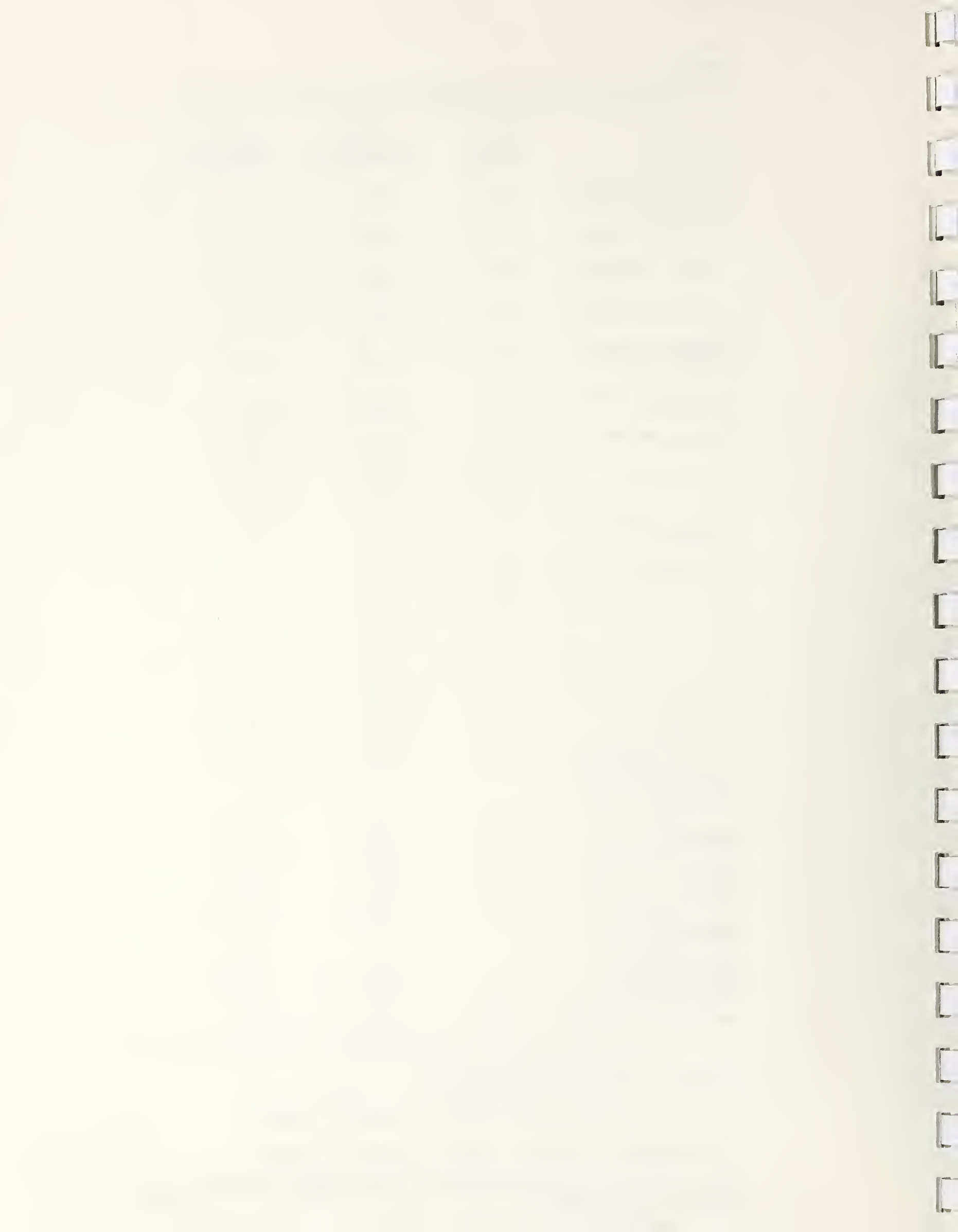
Predictions based on regression model shown in column 3 in Table 2-3.

c

Predictions based on regression model shown in column 4 in Table 2-3.

Note: Predicted amounts do not include any downward adjustment that may be necessary in order to preserve budget neutrality, or constant total outlays across all services and procedures.

Source: 1987 Physicians' Practice Follow-up Survey.





perform, yet Medicare currently pays 8 1/2 times more for this surgical procedure than for the visit. Based on the physician effort involved, however, both services would be reimbursed about the same (\$130).

Interestingly, it is not only the two types of visits that appear "underpaid". Based on their relative time and complexity alone, predicted payments would be higher than current rates for several surgical procedures as well: adjacent tissue transfer, cholecystectomy, total hysterectomy, and craniectomy with excision of brain tumor.

By contrast, five of the surgical procedures shown on Table 2-4 appear substantially "overpaid": pacemaker insertion, cystourethroscopy with bladder tumor resection, biopsy of cervix, ophthalmic ultrasound, and Swan-Ganz catheterization. All of these are relatively uncomplicated and (with the exception of pacemaker insertion) take relatively little time to perform.

What impact does the inclusion of the surgical adjustment make in these predicted payments? Holding procedure time and complexity constant, and assuming minimal pre/post time, surgical procedures are 2.8 times more expensive than medical procedures. (This result is derived by raising the surgery dummy = 2 to the 1.47 power and setting time and complexity to an arbitrary value in col. 4 in Table 2-3.) As expected, predicted payments for non-surgical services fall, although visits still appear "underpaid" by 50-80 percent. While predicted payments for relatively simple invasive procedures like biopsies increase, those for longer operating room procedures (e.g., CABGs) actually decline. This occurs because the predicting equation places a relatively lower weight on the surgeon's time, especially for pre and post-operative care, after adjusting for the 2.8 across-the-board multiplier favoring surgical fees. At the same time, the 95 percent confidence limits associated with all the predicted payments narrow considerably. The net effect is to produce four additional "overpaid" surgical procedures: total hip replacement, total knee replacement, CABG surgery, and tympanoplasty.

Inclusion of the surgical adjustment in the predicting equation thus has the counter-intuitive result of identifying more "outlier" surgical procedures. Given the more precise and more reliable estimates produced by this equation (as evidenced by the narrower confidence band), however, these results are preferred.

The predicted payments on Table 2-4 permit some interesting observations about current Medicare fees for surgical procedures compared to their relative difficulty as perceived by surgeons. For example, Medicare reimburses about the same amount for an original hip replacement as for a revision, but the latter is considerably more complicated and time-consuming. Relative payment amounts would fall for the original replacement but rise substantially for revisions.





By contrast, Medicare currently pays almost 60 percent more for lens extraction plus intraocular lens insertion than for the extraction alone. Yet ophthalmologists report that operating time for the one-stage procedure is only slightly longer and moderately more complex. Based on the physician effort involved, the one-stage procedure would still be paid more than extraction alone, but only 18 percent more.

#### 2.3.4 Predicted Payments for Medical Specialists and Radiologists

Table 2-5 presents similar findings for services performed by medical specialists and radiologists. Given their greater precision and reliability, we will focus here on predicted payments with the surgical adjustment. As was found with the surgical specialists, office and hospital visits appear considerably "underpaid"; predicted payments for internists' initial office visits, for example, are 39 percent higher than current payment levels. Comprehensive consultations provided by internists, on the other hand, appear to be appropriately reimbursed given the physician effort involved. Based on their self-reports, internists estimate that initial hospital visits (not shown in table) and consultations involve comparable levels of time and complexity, yet Medicare currently pays 44 percent more for the latter (\$85 versus \$59).

Four common diagnostic procedures appear considerably "overpaid": skull x-ray, upper GI endoscopy (both diagnostic only and with biopsy), echocardiography, and cardiac catheterization with angiography (both combined right and left heart, and left heart only). Predicted payments for these procedures are about 50 percent lower than current Medicare payment levels. By contrast, current reimbursement rates for other common, but more routine, services such as ECGs, EEGs, and chest x-rays appear to be equitably paid relative to the physician effort involved.

#### 2.4 Implications for Over and Underpaid Physician Services

Our results have shown that the majority of the variation in Medicare payment can be explained by the physician effort associated with providing different services and procedures--particularly if a special allowance is made for surgery. This implies that relative fee differences are less distorted than commonly thought. That is, the fact that thoracic surgeons are paid more for CABGs than general surgeons are for hysterectomies can be largely explained by the greater time and complexity of bypass surgery. Similarly, based on surgeons' self-reports, higher payments for surgery than for visits can be justified by the more intense effort involved.

Nevertheless, a number of services and procedures have been identified that appear to be "under" or "overpaid". CABG surgery is currently paid almost 100 times more than a general surgeon's comprehensive office visit,



TABLE 2-5

ACTUAL AND PREDICTED 1985 MEDICARE ALLOWED CHARGES FOR MEDICAL SPECIALISTS AND RADIOLOGISTS<sup>a</sup>

Description	Actual Allowed Charge	Predicted Amount without Surgical Adj. <sup>b</sup>	Predicted Amount with Surgical Adj. <sup>c</sup>
Skin biopsy	\$40	\$47 (\$38-\$60)	\$84 (\$64-\$111)
Excision of benign lesion, trunk, arms, or legs; lesion 1.1 to 2.0 cm	66	81 (70-95)	140 (111-176)
Diagnostic upper GI endoscopy	279	86 (72-102)	142 (113-179)
Upper GI endoscopy with biopsy	323	97 (80-116)	156 (124-197)
Complete skull x-rays, interpretation and report	22	18 (13-24)	15 (12-19)
Chest X-ray, single view, interpretation and report	13	14 (9-19)	12 (9-16)
Chest X-ray, two views, interpretation and report	14	16 (11-22)	14 (10-18)
Upper GI series interpretation and report	30	34 (28-42)	27 (23-32)
Cholecystography, oral contrast; interpretation and report	19	18 (13-25)	17 (13-22)
Initial comprehensive office visit for general practitioner	40	95 (79-113)	65 (55-76)
Initial comprehensive office visit for internist	61	130 (106-159)	85 (70-102)
Initial comprehensive office visit for cardiologist	65	119 (95-150)	81 (66-99)
Follow-up intermediate office visit for internist	25	46 (36-59)	37 (31-45)
Initial comprehensive hospital visit for cardiologist	68	125 (101-154)	83 (68-100)
Initial comprehensive consultation for internist	85	151 (123-185)	94 (77-115)
ECG interpretation and report	13	17 (13-23)	15 (12-19)
Echocardiography, real time	96	79 (67-94)	53 (45-62)
Combined left heart catheterization with angiography	606	183 (139-240)	258 (200-333)
Combined right and left heart catheterization with angiography	813	246 (182-331)	334 (256-435)
EEG (awake, asleep, and drowsy) interpretation and report	39	50 (39-66)	34 (28-43)

<sup>a</sup> 95 percent confidence limits in parentheses.

<sup>b</sup> Predictions based on regression model shown in column 3 in Table 3.

<sup>c</sup> Predictions based on regression model shown in column 4 in Table 3.

Note: Predicted amounts do not include any downward adjustment that may be necessary in order to preserve budget neutrality, or constant total outlays across all services and procedures.

Source: 1987 Physicians' Practice Follow-up Survey.





but, based on the relative time and complexity of these two services, the difference should be "only" 37-to-one. This, of course, is consistent with the criticism of many observers that Medicare "underpays" for non-procedural (the so-called cognitive) services.

Congress has reduced the Medicare prevailing charges for a number of surgical procedures believed to be "overpaid", including some also identified by our regression methodology: coronary artery bypass surgery, pacemaker insertion, total hip and knee replacements, and upper GI endoscopy. When these procedures were first developed, their high fees may well have been appropriate given their newness and surgeons' inexperience with them. Over time, technological advances and "learning by doing" undoubtedly have made them easier and quicker to perform, yet fees have remained high (Bowen, 1987; Mitchell, et al., 1987b). Indeed, since the UCR method of reimbursement bases payments on submitted charges, the incentive has been to continually increase fees rather than to lower them.

Based on reported physician effort, however, other procedures that also were rolled back by Congress do not appear "overpaid" in relation to time and complexity. These include cataract surgery and prostatectomy, whose actual allowed charges fell within the confidence limits of our predictions, albeit still roughly ten percent above their expected amounts. The reason appears to lie primarily in the relatively long pre and postoperative times reported for these operations. Ophthalmologists report that lens procedures require relatively little time in the operating room (less than one hour), but that they spend almost three times as long in preoperative and follow-up care (recall Table 2-1). In preliminary regressions (not shown here) that included only operating time, both cataract surgery and prostatectomies appeared considerably "overpaid". Since surgeons report that their pre and postoperative care is usually part of their global fee, however, it must be considered as part of the total effort associated with a procedure. Yet, the Congress considered only operating room times in justifying payment reductions. Future deliberations on fee rollbacks should consider any extraordinary time involved in pre and postoperative care, but our results indicate that non-operating time is valued at only one-third the rate of procedure time. And because non-operating time plays such an important role in explaining allowed charges, it will be crucial to measure such time input as accurately as possible, as well as the extent to which this time remains bundled in the global surgical fee.

Of course, other factors might affect fees besides the complexity of the procedure and the time it takes to perform and to provide follow-up care. Visits, for example, may involve more non-physician time, and this effort was not included in our regression methodology. To the extent that office visits require more nurse or aide time, as well as other overhead inputs, they will be even more underpaid relative to operations. Even among surgical procedures, practice costs may differ. General surgeons and gynecologists





performing hysterectomies, for example, face higher malpractice premiums than do ophthalmologists doing lens extractions, yet predicted payments based on time and complexity are comparable for both operations.

A broader question than whether a few surgical procedures are overpriced is whether surgery in general is overpriced. Our results indicate that surgical procedures are 2 1/2 to 3 times more expensive than medical services of equivalent time and complexity. Patient willingness to pay more for surgical intervention, longer training residencies, and higher malpractice costs may all be legitimate explanations for this surgery payment premium. On the other hand, any insurance bias in favor of surgery may have distorted fees in ways that are neither efficient nor equitable. How one evaluates this large unexplained surgical differential would have profound implications for the number of overpriced surgical procedures. If careful study of the extra training and practice costs associated with doing surgery cannot justify a 2-3 fold premium, then an across-the-board rollback in surgical payments may be warranted.



### 3.0 SURGEONS' BILLING PRACTICES FOR SELECTED SURGICAL PROCEDURES

#### 3.1 Motivation

Concerns about the "inherent reasonableness" of the current Medicare method of physician reimbursement have led policymakers to examine the extent to which certain procedures are mispriced relative to the time and effort required. Variations in surgeon's billing practices within and across specialties or procedures as well as over time may limit the ability of policymakers to adjust levels of payment. While many surgeons historically have billed for surgical procedures based on a global surgical fee, the degree of variability in the composition of the global fee is unknown; for example, how many and what types of visits are included in the global fee rather than billed separately?

This analysis explored two aspects of surgeons' billing practices. First, how likely are physicians to include in the global fee the pre-operative office visit in which the decision to operate is made as well as post-hospital office visits, and how does this vary across specialties or procedures? Second, have physicians changed the number of post-hospital office visits they provide in response to shorter hospital stays resulting from the introduction of Medicare's Prospective Payment System? The subsample for this analysis included physicians in seven surgical specialties (general surgery, ophthalmology, orthopedic surgery, urology, obstetrics/gynecology, cardiovascular/thoracic surgery, and neurosurgery) who performed selected procedures at least monthly and who were able to report complete data on billing practices.

#### 3.2 Summary of Findings

##### 3.2.1 Composition of Global Surgical Bills

Physicians' billing practices for services associated with surgical procedures may vary across specialty, geographic location, or even by procedure. Whether a physician's surgical bill includes the pre-operative office visit in which the decision to operate is made cannot be discerned from Medicare claims data because often a single, global bill is submitted. Similarly, global bills may include a wide range in the number of post-hospital office visits, but this too cannot be detected using Medicare claims data. And while surveys of Part B Medicare carriers reveal the practices that carriers follow in screening for inappropriate claims (such as



billing for visits performed within a certain number of days post-operatively), they do not tell us the composition of global bills for individual physicians, especially the number of visits typically provided after discharge and the proportion included in the global fee. Thus, the 1987 Physicians' Practice Follow-up Survey obtained such data for 23 "high volume, high dollar" Medicare procedures.

Surgeons can be classified roughly into three groups based on the extent of follow-up care they provide. On the low end are cardiovascular/thoracic surgeons and obstetrician/gynecologists, providing two to three visits following a surgical procedure (Table 3-1). Urologists, neurosurgeons, and general surgeons average four to five visits, while ophthalmologists and orthopedic surgeons are at the high end with six to seven visits.

The low number of post-hospital office visits reported by cardiovascular/thoracic surgeons suggests that medical specialists (i.e., cardiologists, internists) are providing follow-up care. For example, cardiovascular/thoracic surgeons provide an average of two post-hospital office visits following aortic valve replacement, pacemaker insertion (dual chamber), and coronary artery bypass graft surgery (3 artery). On the other hand, the high number of visits following ophthalmic and orthopedic surgery suggests the lack of appropriate physician substitutes following such surgery. Ophthalmologists provide an average of seven visits following a lens procedure with insertion of intraocular lens, while orthopedic surgeons average six visits following total hip and total knee replacement, femoral fracture with internal fixation, and hemilaminectomy for excision of herniated disk or decompression of nerve root.

Comparing across procedures, we found that follow-up care is virtually identical for abdominal versus vaginal hysterectomies. For carotid thromboendarterectomy, neurosurgeons and cardiovascular/thoracic surgeons report very similar patterns of post-hospital care. Urologists provide slightly more follow-up care for suprapubic prostatectomy than for transurethral resection of the prostate (TURP) because the former is more invasive and more often used for cancer cases.

Next, we examined the composition of the global surgical bill. General surgeons and obstetricians/gynecologists are more likely than other surgeons to include the pre-operative office visit in the global fee, with about half of these physicians not billing separately for the visit in which the decision to operate is made (Table 3-2). In contrast, about 25 to 30 percent of orthopedic surgeons include the pre-operative visit in the global fee for four selected procedures and only 19 percent of ophthalmologists include the pre-operative office visit for a lens extraction with insertion of intraocular lens (IOL).





TABLE 3-1

## DISTRIBUTION OF POST-HOSPITAL OFFICE VISITS FOR SELECTED SURGICAL PROCEDURES

	Average Number of Visits Currently Provided	PERCENT OF PHYSICIANS PROVIDING:				
		1-2 Visits	3-4 Visits	5-6 Visits	7-10 Visits	Over 10 Visits
<u>General Surgery</u>						
Cholecystectomy with common duct exploration	4.0	24.6%	47.6%	20.8%	3.9%	3.0%
Partial colectomy	4.4	18.4	49.1	20.1	8.6	3.7
Inguinal hernia repair	3.0	52.7	34.6	9.8	0.7	2.2
Modified radical mastectomy	5.4	6.3	44.7	27.8	15.6	5.6
<u>Ophthalmology</u>						
Lens extraction with IOL	6.6	1.6	18.6	42.4	32.5	4.9
Scleral buckling	4.8	29.5	--	52.4	18.2	--
Fistulization of sclera	7.4	--	17.7	42.9	17.7	21.6
Intracapsular lens extraction	7.3	6.5	5.3	49.6	21.1	17.4
<u>Orthopedic Surgery</u>						
Simple hip arthroplasty	6.5	23.3	22.9	22.1	17.6	14.1
Total knee replacement	6.1	18.2	28.3	26.4	18.8	8.3
Femoral fracture with internal fixation	6.2	7.2	36.5	34.4	13.2	8.6
Hemilaminectomy for excision of herniated disk or decompression of nerve root	5.8	10.7	33.3	37.6	12.1	6.3
<u>Urology</u>						
Transurethral resection of the prostate	4.0	25.2	52.2	18.1	1.7	2.8
Suprapubic prostatectomy	4.3	26.2	43.8	22.1	--	7.9
<u>Obstetrics-Gynecology</u>						
Total abdominal hysterectomy	2.6	64.8	25.8	5.1	4.4	--
Vaginal hysterectomy	2.6	68.8	25.7	1.8	3.7	--
<u>Cardiovascular/ Thoracic Surgery</u>						
3 artery CABG	1.8	67.5	32.5	--	--	--
Pacemaker insertion-dual chamber	2.0	66.9	33.1	--	--	--
Aortic valve replacement	1.6	81.9	18.1	--	--	--
Carotid thromboendarterectomy	3.5	54.6	7.5	28.5	9.4	--
<u>Neurosurgery</u>						
Craniectomy or craniotomy for evacuation of hematoma	4.2	12.3	49.5	28.7	9.5	--
Lumbar laminectomy for decompression of spinal cord	4.6	11.5	51.2	27.2	5.0	5.0
Carotid thromboendarterectomy	3.3	58.7	12.7	15.6	13.1	--

Source: 1987 Physicians' Practice Follow-up Survey.



TABLE 3-2

## OVERVIEW OF SURGEONS' BILLING PRACTICES

<u>COMPOSITION OF GLOBAL FEE (Percent of MDs)</u>					
	<u>Pre-Operative Visit<sup>a</sup></u>	<u>Extent of Post-Hospital Visits Included in Global Fee</u>			<u>Percent of Total Post-Visits in Office Visits in Global Fee<sup>b</sup></u>
		<u>All</u>	<u>Some</u>	<u>None</u>	
<u>General Surgery</u>					
Cholecystectomy with common duct exploration	59.6	83.7	2.6	13.7	98.9%
Partial colectomy	54.9	89.8	2.1	8.1	99.3
Inguinal hernia repair	53.3	90.1	3.1	6.7	99.6
Modified radical mastectomy	49.1	85.1	5.7	9.2	96.1
<u>Ophthalmology</u>					
Lens extraction with IOL	19.3	90.7	9.3	--	95.2
Scleral buckling	34.2	86.6	--	13.4	100.0
Fistulization of sclera	0.0	89.2	10.8	--	99.3
Intracapsular lens extraction	42.9	90.8	9.2	--	97.5
<u>Orthopedic Surgery</u>					
Simple hip arthroplasty	31.1	77.4	11.2	11.4	96.9
Total knee replacement	29.5	75.8	17.4	6.7	92.4
Femoral fracture with internal fixation	31.5	70.0	16.4	13.7	90.7
Hemilaminectomy for excision of herniated disk or decompression of nerve root	25.0	78.7	11.3	10.0	94.4
<u>Urology</u>					
Transurethral resection of the prostate	28.3	86.9	7.8	5.2	98.2
Suprapubic prostatectomy	20.2	80.5	11.5	8.0	88.9
<u>Obstetrics-Gynecology</u>					
Total abdominal hysterectomy	53.5	92.9	3.6	3.5	99.0
Vaginal hysterectomy	51.6	95.5	2.7	1.8	99.5
<u>Cardiovascular/ Thoracic Surgery</u>					
3 artery CABG	28.4	74.7	--	25.3	100.0
Pacemaker insertion-dual chamber	31.2	86.1	--	13.9	100.0
Aortic valve replacement	30.6	69.4	--	30.6	100.0
Carotid thromboendarterectomy	41.6	75.1	8.6	16.3	86.2
<u>Neurosurgery</u>					
Craniectomy or craniotomy for evacuation of hematoma	35.9	86.9	4.7	8.4	
Lumbar laminectomy for decompression of spinal cord	35.5	72.4	16.8	10.8	
Carotid thromboendarterectomy		12.7	89.9	--	10.1

<sup>a</sup>Refers to the visit in which the decision to operate is made.<sup>b</sup>Based on physicians who include at least one post-hospital office visit in the global fee.

Source: 1987 Physician's Practice Follow-up Survey.



Compared to pre-operative visits, physicians were far more likely to include all or some post-hospital office visits in the global fee. At least three out of four surgeons included all such visits in the global fee, regardless of specialty and procedure. Over 90 percent of obstetricians/gynecologists include all post-hospital office visits following hysterectomy, while 25 to 30 percent of cardiovascular/thoracic surgeons bill separately for all follow-up office visits.

Consistent with their high volume of follow-up care, orthopedic surgeons have the longest follow-up period, averaging five months, in part because bones take a long time to heal (Table 3-3). At the other extreme, obstetricians/gynecologists have a relatively short follow-up period of two months, with three-fourths including visits in the global fee for 31-90 days post-operatively. Ophthalmologists, on the other hand, tend to provide a relatively high number of visits (most of which are included in the global fee), but the post-operative time is relatively short (generally less than three months).

This work suggests that information on the composition of surgeons' global fees is critical in our work on mispriced procedures. Information about physicians' billing practices is critical in evaluating the "inherent reasonableness" of Medicare payments to physicians for "high volume, high dollar" surgical procedures. Without such information, the interpretation of time and complexity data could be misleading. Take, for example, two surgical procedures that involve roughly the same time and complexity. One procedure, however, involves several post-hospital follow-up office visits, while the other requires little follow-up care upon discharge from the hospital. It is important to know whether the bill for the former surgical procedure includes post-hospital office visits. If so, any adjustments in the payment level must take into account the additional services included in the global fee.

In addition, information from the physician's perspective, as obtained through the Physicians' Practice Follow-up Survey, should be brought together with information from carrier surveys, as well as with claims analyses. Such work will be performed under a separate, existing Cooperative Agreement from the Health Care Financing Administration. With these three pieces of information, we can hope to obtain a better understanding of services included in the global surgical bill versus those billed separately.

### 3.2.2 Comparison of Post-Hospital Office Visits: 1982-1987

With the introduction of Medicare's Prospective Payment System (PPS) in fiscal year 1984, hospitals faced incentives to shorten lengths of inpatient stays and shift pre-admission testing and post-operative follow-up care to





TABLE 3-3

LENGTH OF POST-HOSPITAL OFFICE VISIT COVERAGE<sup>a</sup>

		PERCENT OF PHYSICIANS REPORTING:					
	Average number of days	1-30 Days	31-90 Days	91-180 Days	181-365 Days	Over 365 Days	As long as necessary <sup>b</sup>
<u>General Surgery</u>							
Cholecystectomy with common duct exploration	121	16.1%	54.8%	6.7%	6.8%	3.0%	12.6%
Partial colectomy	84	19.1	53.4	10.4	3.1	1.1	12.8
Inguinal hernia repair	73	30.6	46.5	5.7	6.7	--	10.5
Modified radical mastectomy	111	15.1	48.7	12.9	9.2	1.3	12.8
<u>Ophthalmology</u>							
Lens extraction with IOL	105	4.4	57.9	32.9	1.3	--	3.4
Scleral buckling	99	--	60.5	39.5	--	--	--
Fistulization of sclera	120	--	54.2	37.8	8.0	--	--
Intracapsular lens extraction	88	6.6	68.6	10.7	--	--	14.0
<u>Orthopedic Surgery</u>							
Simple hip arthroplasty	169	7.8	36.6	36.1	16.0	3.5	--
Total knee replacement	147	12.9	33.0	38.5	11.7	2.0	2.0
Femoral fracture with internal fixation	153	10.0	37.0	37.0	11.1	2.3	2.6
Hemilaminectomy for excision of herniated disk or decompression of nerve root	157	3.0	39.3	37.2	17.2	--	3.3
<u>Urology</u>							
Transurethral resection of the prostate	101	11.8	65.4	16.0	5.0	--	1.8
Suprapubic prostatectomy	102	16.5	56.1	22.6	4.8	--	--
<u>Obstetrics-Gynecology</u>							
Total abdominal hysterectomy	63	13.7	73.9	6.9	1.2	--	4.3
Vaginal hysterectomy	60	8.1	77.8	7.7	--	--	6.5
<u>Cardiovascular/ Thoracic Surgery</u>							
3 artery CABG	72	16.9	40.2	--	--	--	42.9
Pacemaker insertion-dual chamber	50	22.3	57.5	--	--	--	20.1
Aortic valve replacement	90	--	71.6	--	--	--	28.4
Carotid thromboendarterectomy	164	--	57.0	--	23.5	--	19.5
<u>Neurosurgery</u>							
Craniectomy or craniotomy for evacuation of hematoma	123	--	44.9	31.4	--	--	23.7
Lumbar laminectomy for decompression of spinal cord	119	--	52.7	31.2	--	--	16.2
Carotid thromboendarterectomy	144	--	34.7	14.1	14.5	--	36.7

<sup>a</sup>Includes physicians who report any post-hospital office visits in the global fee.<sup>b</sup>Some physicians were unwilling or unable to quantify the length of coverage for post-hospital office visits included in the global fee. The percentages are reported here, but these physicians are not included in the computation of the average number of days (column 1).

Source: 1987 Physicians' Practice Follow-up Survey.



TABLE 3-4  
CHANGES IN POST-HOSPITAL OFFICE VISIT PATTERNS OVER THE PAST FIVE YEARS FOR SELECTED SURGICAL PROCEDURES

	COMPARISON OF VISITS TYPICALLY PROVIDED 1982 VS. 1987 (PERCENT OF PHYSICIANS)			AVERAGE NUMBER OF VISITS		
	Same	Less in 1987	More in 1987	1982	1987	Percent Change 1982 - 1987
<u>General Surgery</u>						
Cholecystectomy with common duct exploration	95.3%	--	4.7%	4.0	4.0	1.31%
Partial colectomy	95.6	3.6	0.9	4.5	4.4	-1.67
Inguinal hernia repair	95.4	3.0	1.6	3.0	3.0	-1.13
Modified radical mastectomy	95.3	2.1	2.6	5.4	5.4	0.00
<u>Ophthalmology</u>						
Lens extraction with IOL	81.2	12.5	6.3	7.0	6.6	-4.93
Scleral buckling	100.0	--	--	4.8	4.8	0.00
Fistulization of sclera	82.3	8.0	9.8	7.0	7.4	5.19
Intracapsular lens extraction	84.3	6.5	9.2	7.4	7.3	-0.85
<u>Orthopedic Surgery</u>						
Simple hip arthroplasty	94.6	2.2	3.2	6.6	6.5	-0.55
Total knee replacement	93.6	2.6	3.8	6.1	6.1	-0.35
Femoral fracture with internal fixation	97.4	2.6	--	6.3	6.2	-1.72
Hemilaminectomy for excision of herniated disk or decompression of nerve root	97.1	--	2.9	5.8	5.8	0.54
<u>Urology</u>						
Transurethral resection of the prostate	97.3	1.7	1.0	4.0	4.0	-0.32
Suprapubic prostatectomy	100.0	--	--	4.4	4.3	0.00
<u>Obstetrics-Gynecology</u>						
Total abdominal hysterectomy	95.8	0.6	3.6	2.7	2.6	-0.46
Vaginal hysterectomy	96.3	0.9	2.8	2.6	2.6	-2.50
<u>Cardiovascular/ Thoracic Surgery</u>						
3 artery CABG	100.0	--	--	1.8	1.8	0.00
Pacemaker insertion-dual chamber	100.0	--	--	2.0	2.0	0.00
Aortic valve replacement	100.0	--	--	1.6	1.6	0.00
Carotid thromboendarterectomy	100.0	--	--	3.5	3.5	0.00
<u>Neurosurgery</u>						
Craniectomy or craniotomy for evacuation of hematoma	96.3	3.7	--	4.3	4.2	-1.11
Lumbar laminectomy for decompression of spinal cord	93.7	6.3	--	4.7	4.6	-1.33
Carotid thromboendarterectomy	100.0	--	--	3.3	3.3	0.00

Source: 1987 Physicians' Practice Follow-up Survey.



outpatient settings. The Medicare average length of stay dropped nationally from 10.2 days in 1982 to 8.8 days in 1984, a 7.1 percent annual decrease from 1982 to 1984 (OTA, 1985). Large decreases in average length of stay have been noted even in areas with relatively short stays. In the Pacific states, for example, pre-PPS stays averaged 8.5 days, while post-PPS stays averaged 7.4 days, a 13 percent decrease from 1982 to 1984 (HCFA, 1985). By contrast, hospital stays in New England averaged 11.8 days pre-PPS and 10.3 days post-PPS, a 12.5 percent decrease.

Whether physicians have increased the number of office visits they provide in response to shorter hospital stays is unknown. Medicare claims data cannot be used to answer this question because of global billing practices. In other words, the surgical bill may contain charges not only for the surgery itself, but also for hospital visits performed pre- and post-operatively, as well as office visits provided before and after hospitalization. Where office visits are packaged with the surgical bill, the number of separate bills for office visits will understate the actual number of visits performed. Thus, the 1987 Physicians' Practice Follow-up Survey asked physicians in seven surgical specialties about their billing practices and post-hospital office visit patterns for 23 procedures.

Physicians reported virtually no change in their post-hospital office visit patterns in the pre- and post-PPS time periods (Table 3-4). Physicians apparently have not responded to length of stay reductions by increasing (or decreasing) the number of follow-up office visits they provide. There are several possible explanations for this finding. First, the marginal hospital day may be unnecessary, thus having no marginal impact on follow-up office visits. Second, the intensity (e.g., content or length) of each visit may have changed, eliminating the need for additional visits. Third, physician recall may be imperfect, masking real changes that may have occurred. Fourth, technological changes may reduce the need for additional follow-up care, such as staples that may be removed two days post-operatively, or stitches that dissolve.





#### 4.0 IMPACT OF MALPRACTICE INSURANCE COSTS ON PHYSICIAN PRACTICE, 1983-1986

##### 4.1 Motivation

The medical malpractice insurance "crisis" of the 1970s brought about widespread reforms to control the cost and assure the availability of malpractice insurance. Legislation was enacted in 49 states (excluding West Virginia) Pursuing two general strategies (GAO, 1986).

- creating new sources of insurance, including joint underwriting associations, reinsurance exchanges, physician and hospital-owned insurance companies, hospital self-insurance programs, and state administered excess-limits or patient compensation funds; and
- developing a new form of insurance policy, known as claims-made policies,\* which would allow insurers to more reliably predict their losses and set premium levels.

To what extent is the United States involved in another crisis in the mid-1980s? According to a study by the General Accounting Office (1986a), frequent news reports were broadcast by the media in 1985 concerning rising premiums, claims incidence, and jury awards, changing practice patterns and caseloads to reduce risk, early retirements or specialty changes, and so on.

The 1987 Physicians' Practice Follow-up Survey (PPFS) was conducted to obtain data on 1986 malpractice insurance premiums, liability coverage limits, perceived availability problems, and selected practice impacts. The physicians participating in the PPFS also participated in an earlier survey, the Physicians' Practice Costs and Income Survey (PPCIS), in which they provided data on malpractice insurance premiums in 1983. Data from the initial PPCIS and the Follow-up Survey enable us to compare the level of premiums in 1983 versus 1986, both in absolute terms and relative to physician gross incomes. These surveys are the only known sources of self-reported data from a panel of physicians across two points in time. To better understand the nature of the malpractice situation in the mid-1980s, we also address the following issues:

- Have physicians changed their liability coverage limits, perhaps due to increased claims incidence or higher settlements?

---

\*According to A Discursive Dictionary of Health Care (1976) a claims made policy "increases the accuracy of ratemaking... (T)he insured is covered for any claim made, rather than any injury occurring, while the policy is in force." Under an occurrence policy, "the insured is covered for any claims arising from an incident which occurred or is alleged to have occurred during the policy period, regardless of when the claim is made."



- Have physicians experienced problems with the availability of malpractice insurance, such as lack of certain types of coverage or withdrawal of carriers from their state?
- Have physicians discontinued performing high-risk procedures, such as obstetrics or certain types of surgery?
- Have physicians discontinued treating certain types of cases, possibly creating access problems for selected types of patients?

#### 4.2 Summary of Findings

For the vast majority of physician (90%), the malpractice insurance premium was paid solely by the physician or his or her practice. For 3 percent, the hospital paid the premium, while for 6 percent the physician/practice and the hospital shared the cost of the coverage. In 1986, 1 percent of physicians were uninsured for cases of medical malpractice. About one-fourth of these were never insured, while one-third of the "bare" physicians had discontinued their coverage since 1984.

In 1986, physician own malpractice payments averaged \$14,780, about 6.2 percent of gross practice income (Table 4-1). (By own malpractice payments we mean the amount paid by the physician or his or her practice.) Premiums were 75 percent higher in 1986 than in 1983 (\$8,446 in 1983), but relative to gross income they were 57 percent higher (4.0% of gross in 1983). Malpractice insurance premiums rose faster than either the Consumer Price Index (10.1% from 1983 to 1986) or the Medical Care Index (21.3%).

Premiums ranged nearly five-fold across specialties, from \$6,474 for internists to \$31,180 for obstetrician/gynecologists (OBGs). Also at the low end (under \$10,000) were general and family practitioners, other medical specialists (e.g., allergists, dermatologists), and ophthalmologists. At the high end of the range (over \$20,000) were anesthesiologists, general surgeons, orthopedic surgeons, and other surgical specialties (e.g., cardiovascular/thoracic surgeons, plastic surgeons). Physicians with high premium costs in absolute terms also bore a high cost relative to their gross income.

From 1983 to 1986, premiums doubled for radiologists, other medical specialists, and OBGs. In fact, OBGs bore a much greater burden relative to their gross incomes, spending 10.8 percent of gross on malpractice insurance, up from 6.3 percent in 1983.

Not only do premiums vary substantially across specialties, but also across the country, ranging from \$9,760 in the West South Central region to \$17,647 in the Middle Atlantic region (Table 4-1). The largest premium increases -- roughly a doubling in costs -- occurred in the East and West South Central and East North Central regions.





TABLE 4-1

INTERSPECIALTY DIFFERENCES IN OWN MALPRACTICE INSURANCE PAYMENTS,  
1983-1986<sup>a,b</sup>

	AVERAGE OWN MALPRACTICE PAYMENTS			OWN MALPRACTICE PAYMENTS AS A PERCENT OF GROSS INCOME		
	1983	1986	% Change	1983	1986	% Change
ALL PHYSICIANS	\$8,446	\$14,781	75.0%	4.0%	6.2%	57.2%
<u>Specialty</u>						
General practice	4,457	6,658	49.4	3.3	4.4	33.5
Family practice	4,138	7,535	82.1	3.0	5.0	65.8
Internal medicine	3,684	6,474	75.7	2.4	3.6	49.9
Cardiology	7,288	11,145	52.9	3.1	5.0	48.2
Other medical specialties	3,818	7,825	105.0	2.1	3.2	56.4
General surgery	11,850	21,073	77.8	6.4	8.8	37.3
Orthopedic surgery	15,563	26,348	69.3	5.6	8.1	44.1
Ophthalmology	5,614	9,423	67.8	2.3	2.9	26.1
Urology	8,664	15,953	84.1	3.4	6.1	76.7
Obstetrics/gynecology	15,230	31,180	104.7	6.3	10.8	72.1
Other surgical specialties	15,315	25,204	64.6	4.5	7.8	74.0
Anesthesiology	13,759	20,193	46.8	5.6	8.9	59.5
Radiology	5,864	11,320	93.0	2.3	3.9	70.8
<u>Region</u>						
New England	\$7,248	\$13,145	81.4%	4.6%	5.9%	26.4%
Middle Atlantic	10,461	17,647	68.7	5.1	7.5	45.5
South Atlantic	8,040	13,959	73.6	3.8	6.3	64.5
East North Central	6,671	13,048	95.6	2.9	6.1	114.8
East South Central	8,267	16,672	101.7	3.9	6.8	76.4
West North Central	6,405	12,590	96.6	3.4	4.8	41.6
West South Central	5,738	9,760	70.1	2.9	4.0	39.9
Mountain	7,800	14,156	81.5	4.1	7.3	76.0
Pacific	10,800	16,011	48.3	4.2	6.2	45.7
<u>Practice Arrangement</u>						
Self-employed	\$8,460	\$14,771	74.6%	4.1%	6.3%	51.1%
<u>Employed by:</u>						
Hospital or university	6,264	10,149	62.0	2.6	6.2	140.5
Clinic or HMO	9,190	15,771	71.6	2.5	7.3	192.6
Another physician or corporation	8,925	16,429	84.1	3.6	5.8	61.7

<sup>a</sup>Own malpractice payments refer to payments made by the physician or the physician's practice. Excludes payment made by the hospital on the physician's behalf.

<sup>b</sup>Includes physicians with own malpractice payments.

Source: 1987 Physicians' Practice Follow-up Survey.





In 1983, employed physicians spent proportionately less of their gross income on their own malpractice insurance compared to self-employed physicians (Table 4-1). By 1986, however, the rates equalled or exceeded the average for self-employed physicians. For example, hospital employees experienced a doubling in their out-of-pocket premium expenses relative to gross incomes (from 3.6% to 6.2%), while clinic and HMO employees faced a tripling (from 2.5% to 7.3%).

The most common coverage limits (per case/total) in 1986 were \$1 million/\$3 million, reported by 42 percent of physicians (data not shown). The second most common limits were \$1 million/\$1 million (11%), followed by \$100,000/\$300,000 and \$200,000/\$600,000 (6% each). Little variation was exhibited across specialties and practice arrangements.

Since 1983, one-in-three physicians changed their coverage limits, including 15 percent who increased and 17 percent who decreased their per case amount (data not shown). Similarly, 16 percent increased and 20 percent decreased their total limit. From 1983 to 1986, the average total limit rose 7.4 percent, from just under \$2.3 million to slightly more than \$2.4 million.

When asked about problems with the availability of malpractice insurance, only 13 percent of physicians responded they had encountered a problem in obtaining insurance (Table 4-2). Physicians' responses to open ended questions were recoded into closed categories for purposes of this analysis. About half of those reporting a problem indicated a general availability problem such as (1) a carrier withdrew from the state, (2) they were denied coverage or their policy was cancelled, or (3) they felt there were not enough carriers to choose from. (Some of these problems, however, may have occurred during the 1970's "crisis".)

Another third were concerned about the availability of certain types of coverage, for example, restrictions on coverage limits, lack of umbrella coverage, or procedures performed. Another one-in-six physicians explicitly mentioned the cost of insurance as a problem (although this is not strictly an availability problem, but rather a willingness-to-pay issue).

Physicians were asked whether they had adopted negative defensive medicine practices, that is, discontinuing to perform certain procedures or to treat certain cases. Again, physicians' open-ended responses were recoded for this analysis. Overall, 14 percent discontinued performing one or more procedures and 11 percent stopped treating certain cases in response to malpractice insurance costs.

Of physicians who had discontinued performing certain procedures, about one-fourth had discontinued providing obstetrical care (Table 4-3). General and family practitioners tended to cease all obstetrical practice, while OBGs discontinued their high-risk obstetrical practice (including the performance of Caesarean-section deliveries). Of those discontinuing all surgery,



TABLE 4-2

PERCEIVED PROBLEMS WITH THE AVAILABILITY OF MALPRACTICE INSURANCE<sup>a,b</sup>

	Percent of All Physicians (1)	Percent of Physicians Indicating Problems (2)
<b>INSURANCE NOT AVAILABLE (General)</b>		
Withdrawal of carrier from state	2.5%	18.5%
State/medical society formed company	1.1	8.3
Denial/cancellation by one or more carriers	1.6	12.2
Not enough carriers to choose from	1.0	8.1
Part-time MDs not covered	<u>0.1</u>	<u>0.6</u>
SUBTOTAL	6.3	47.8
<b>TYPE OF INSURANCE NOT AVAILABLE</b>		
Limit on extent of coverage	0.9	7.0
Certain procedures or specialty not covered	0.6	4.3
Umbrella coverage not available	0.2	1.2
Desired coverage not available	0.6	4.6
Limit on practice size	<u>0.1</u>	<u>0.6</u>
SUBTOTAL	2.4	17.7
<b>COST OF INSURANCE</b>		
High cost - general	2.0	15.8
High cost for obstetrics	0.1	0.5
High cost for older MDs	<u>c</u>	<u>0.2</u>
SUBTOTAL	2.1	16.4
<b>OTHER</b>		
Problem more than 5 years ago	1.4	11.0
Other/uncodeable	<u>0.8</u>	<u>7.1</u>
SUBTOTAL	2.2	18.1
<b>TOTAL</b>	<b>13.0</b>	<b>100.0</b>

<sup>a</sup>Physician responses to open-ended questions have been recoded into closed categories for purposes of this analysis.

<sup>b</sup>Inconsistencies between columns (1) and (2) are due to rounding.

<sup>c</sup>Less than 0.05 percent.

Source: 1987 Physicians' Practice Follow-up Survey.



TABLE 4-3

HIGH-RISK PROCEDURES DISCONTINUED AS A RESULT OF MALPRACTICE INSURANCE COSTS<sup>a,b</sup>

	Percent of All Physicians (1)	Percent of Physicians Indicating Problems (2)
<b>OBSTETRICS</b>		
Obstetrics (general)	2.3%	16.6%
High risk obstetrics	<u>1.1</u>	<u>6.9</u>
SUBTOTAL	3.3	23.5
<b>SURGERY - GENERAL</b>		
All surgery	1.2	8.5
Some surgery	0.7	4.9
Surgical assisting	0.6	4.4
Office surgery	<u>0.1</u>	<u>0.9</u>
SUBTOTAL	2.7	18.5
<b>MAJOR SURGERY</b>		
Orthopedic	0.9	5.4
Plastic	0.3	2.1
Cardiovascular	0.3	2.0
Urological	0.1	1.5
Abdominal	0.2	1.4
Head and neck	0.3	1.4
Hand	0.2	1.2
Gynecological	0.1	1.0
ENT	0.2	0.8
Thoracic	c	0.3
Other	<u>0.7</u>	<u>4.3</u>
SUBTOTAL	3.3	21.4
<b>MINOR SURGERY</b>		
Cardiovascular	0.5	4.1
Fertility/infertility	0.4	3.0
Eye surgery	0.3	2.2
Arthrocentesis, paracentesis, thoracentesis, amniocentesis	0.2	1.1
Lumbar punctures	<u>0.1</u>	<u>0.9</u>
SUBTOTAL	1.5	11.3
<b>OTHER PROCEDURES/SERVICES</b>		
Biopsies	0.5	3.5
Orthopedics (non-surgical)	0.4	2.7
Endoscopies	0.3	1.7
Pediatrics	0.2	1.5
Emergency room services	0.2	1.0
Accidents and trauma	<u>c</u>	<u>0.1</u>
SUBTOTAL	1.6	10.4
<b>OTHER</b>		
All high risk	0.6	4.0
Medicaid and indigent	0.1	0.5
Other/uncodeable	<u>1.4</u>	<u>10.3</u>
SUBTOTAL	2.1	14.9
<b>TOTAL</b>	<b>14.4</b>	<b>100.0</b>

<sup>a</sup>Physician responses to open-ended questions have been recoded into closed categories for purposes of this analysis.

<sup>b</sup>Inconsistencies between columns (1) and (2) are due to rounding.

<sup>c</sup>Less than 0.05 percent.

Source: 1987 Physicians' Practice Follow-up Survey.





again general and family practitioners were disproportionately represented. By stopping surgery and/or obstetrics, general and family practitioners are placed in a lower risk category and charged a lower malpractice premium. Other responses to malpractice insurance costs included discontinuation of specific types of major or minor surgery, office surgery or surgical assisting, and referral of all high risk procedures.

Physicians most often discontinued seeing certain cases based on non-medical characteristics of patients (Table 4-4). Two types of patients were most affected: patients involved in litigation, and Medicaid and indigent patients (each reported by 1% of all physicians, or 11% of physicians refusing certain cases). Surgeons were most likely to refuse patients involved in litigation, presumably because they perceived a higher risk that a malpractice claim would be made. Both surgeons and primary care physicians were likely to deny services to Medicaid patients, raising concerns about access to care among low-income patients. These findings raise questions, however, about the extent to which physicians' decisions to refuse Medicaid patients are motivated strictly by rising malpractice costs or perceived risk, or are also based, for example, on the level of Medicaid payments for obstetrics or other services.

Negative defensive medicine practices do not appear to be nearly as widespread as positive defensive medicine strategies. For example, Zuckerman (1986) found that physicians were likely to increase record-keeping (57%), increase patient referral (45%), perform additional tests (41%), and spend more time with patients (36%) to reduce the risk of malpractice suits.



TABLE 4-4

TYPES OF CASES DISCONTINUED AS A RESULT OF MALPRACTICE INSURANCE COSTS<sup>a,b</sup>

	Percent of All Physicians (1)	Percent of Physicians Indicating Problems (2)
<b>PATIENT CHARACTERISTICS</b>		
Patients involved in litigation	1.3	11.4
Medicaid and indigent	1.2	11.3
Medicare	c	0.4
All high risk	0.5	4.7
Increased referrals	0.3	3.2
Other patient characteristics	<u>0.6</u>	<u>4.4</u>
SUBTOTAL	4.1	35.4
<b>PROCEDURES/SERVICES</b>		
Emergency room services	0.6	5.6
Accidents and trauma	0.4	3.9
Pediatrics	0.4	3.7
Cardiovascular procedures (non-surgical)	0.3	2.9
Endoscopies	0.2	1.3
Other procedures	<u>0.7</u>	<u>6.6</u>
SUBTOTAL	2.6	24.0
<b>OBSTETRICS</b>		
Obstetrics (general)	1.5	13.7
High risk obstetrics	<u>0.9</u>	<u>7.7</u>
SUBTOTAL	2.4	21.5
<b>SURGERY</b>		
Some surgery	1.5	12.5
All surgery	0.2	1.6
Surgical assisting	<u>0.1</u>	<u>0.4</u>
SUBTOTAL	1.8	14.5
Other/uncodeable	0.4	4.7
<b>TOTAL</b>	11.2	100.0

<sup>a</sup>Physician responses to open-ended questions have been recoded into closed categories for purposes of this analysis.

<sup>b</sup>Inconsistencies between columns (1) and (2) are due to rounding.

<sup>c</sup>Less than 0.05 percent.

Source: 1987 Physicians' Practice Follow-up Survey.



## 5.0 TRENDS IN MEDICARE PARTICIPATION AND ASSIGNMENT RATES, 1984-1987

### 5.1 Motivation

The Deficit Reduction Act of 1984 (DEFRA) created a Participating Physicians' Program under Part B of Medicare. Physicians who signed the Participation Agreement would accept 100 percent of Medicare cases on assignment. Those who chose not to participate would still be able to decide on a case-by-case basis whether to accept the assigned amount from Medicare (as payment in full), or whether to bill patients directly for their actual fee. The major incentive for participating was an update in the charge profile for participants, but not for non-participants, at the end of the fee freeze.

The initial participation period was for the fiscal year beginning October 1, 1984. Congress extended the participation program and the fee freeze, instituting a second sign-up period for the fiscal year beginning October 1, 1985. When the freeze on prevailing charges for participating physicians was lifted, a third participation decision was made as of May 1, 1986. Finally, under the Omnibus Budget Reconciliation Act of 1986 (OBRA) a fourth decision period was provided. Based on a complex array of participation incentives included under OBRA, physicians were required to decide by January 1, 1987 whether or not to sign the Participation Agreement.

First, the update in the prevailing charge levels for non-participants was only 96 percent of the prevailing charge for participants. Second, non-participants have been limited in their actual charge levels (known as the maximum allowable actual charge), based on a formula that compares the lower of (1) the physicians' 1984 base-period charge or (2) the 1986 average actual charge, to the 1987 prevailing charge for non-participating physicians. The actual charge limits are calculated for each procedure or service the physician performs. Beginning October 1, 1987, non-participants must notify beneficiaries of the estimated actual charge for elective surgery of \$500 or more; the estimated approved charge; the amount by which the actual charge exceeds the approved charge; and the amount of coinsurance. This provision is designed to provide the beneficiary with sufficient information on potential liability for elective surgical procedures.

Other participation incentives include prompter payment of participants' claims; listing in a directory of participating physicians; notices about the participation program to beneficiaries submitting unassigned claims; requirement for hospital officials to inform patients of physician participation status when making hospital referrals and to identify a participating physician, where possible; toll-free telephone lines maintained





by the carriers to provide names of participating physicians; and emblems of participation to display in the physician's office.

The 1987 Physicians' Practice Follow-up Survey provides a unique opportunity to study the impact of these sweeping changes in physician participation and assignment incentives during the mid-1980s. Physicians participating in the 1983 Physicians' Practice Costs and Income Survey were resurveyed during the first six months of 1987 on their participation decisions in each of the four sign-up periods: October 1984, October 1985, May 1986, and January 1987. (Physicians with any Medicare patients who were able to report their participation decision for all four time periods are included.) In addition, physicians were asked about their reasons for signing or not signing. Also, non-participating physicians were asked what percent of their Medicare caseload is currently accepted on assignment.

## 5.2 Summary of Findings

Overall, participation rates dropped slightly from 37 percent in October 1984 to 34 percent in October 1985, presumably reflecting physicians' expectation that the fee freeze would be extended beyond the original 15-month period (Table 5-1). In May 1986 this rate increased to 36 percent, in part due to the incentive of differential charge updates to participating physicians. By January 1987, nearly 39 percent of physicians had signed participation agreements in response to a wide range of incentives as discussed above. (However, none of these differences were found to be statistically significant.)

Most specialties followed this pattern so the relative differences in participation rates remained relatively constant, with one notable exception. Participation rates among obstetrician/gynecologists steadily increased over the four time periods from 36 percent in October 1984 to 45 percent by January 1987.

Most physicians were consistent in their decision across the first three time periods as shown in Table 5-2:

- 30 percent of all physicians signed in October 1984 as well as the subsequent two time periods. The two most important factors in their decision were the advantages to their patients and that they already accepted most cases on assignment so there would be no particular disadvantage to the physician in signing.
- 57 percent refused to sign in all three time periods. Nearly all of these physicians believe that physicians should set their own fees. This group also preferred to leave open the option of balance billing.



TABLE 5-1

PARTICIPATION RATES BY SPECIALTY<sup>a</sup>

	<u>October 1984</u>	<u>October 1985</u>	<u>May 1986</u>	<u>January 1987</u>
ALL PHYSICIANS	37.0%	34.3%	36.1%	38.6%
General Practice	33.5	27.7	29.3	31.2
Family Practice	31.1	25.8	27.5	27.6
Internal Medicine	38.6	31.9	35.6	39.1
Cardiology	45.3	44.9	43.6	48.5
Other Medical Specialties	41.8	36.2	36.8	42.9
General Surgery	43.8	42.4	45.2	46.8
Orthopedic Surgery	39.6	38.9	39.7	42.8
Ophthalmology	29.0	26.1	27.3	33.0
Urology	32.4	31.7	35.3	38.3
Obstetrics/Gynecology	35.6	39.2	42.5	45.0
Other Surgical Specialties	31.6	32.2	31.6	34.1
Anesthesiology	26.2	23.1	23.8	24.6
Radiology	51.5	53.9	56.8	56.6

<sup>a</sup>Only includes physicians for whom participation status was known for every decision point, and who treated Medicare patients.

Source: 1987 Physicians' Practice Follow-up Survey.



TABLE 5-2

PARTICIPATION DECISION PATTERNS, BY SPECIALTY<sup>a</sup>

	<u>Signer</u>	<u>Non-Signer</u>	<u>Signer to Non-Signer</u>	<u>Non-Signer to Signer</u>	<u>Signer/Non-signer/Signer</u>
ALL PHYSICIANS	29.9%	57.4%	6.5%	5.6%	0.7%
General Practice	21.6	60.4	10.4	6.2	1.6
Family Practice	21.1	62.9	9.7	6.0	0.4
Internal Medicine	30.2	56.7	7.7	4.7	0.7
Cardiology	37.3	49.4	6.9	5.3	1.1
Other Medical Specialties	33.3	55.3	7.9	2.9	0.6
General Surgery	37.9	49.7	5.2	6.5	0.8
Orthopedic Surgery	32.9	54.4	5.9	6.0	0.9
Ophthalmology	22.3	67.2	5.5	3.8	1.1
Urology	27.6	61.6	3.0	6.0	1.8
Obstetrics/Gynecology	32.5	54.4	3.0	10.0	0.0
Other Surgical Specialties	27.5	64.3	4.1	4.2	0.0
Anesthesiology	20.6	71.0	5.2	2.8	0.4
Radiology	47.3	39.8	3.4	8.7	0.8

<sup>a</sup>Based on participation decisions in October 1984, October 1985, and May 1986. Rows sum to 100 percent.

Source: 1987 Physicians' Practice Follow-up Survey.





- Only 13 percent changed their decision, including about 7 percent who changed from signers to non-signers, about 6 percent who changed from non-signers to signers and less than 1 percent who changed from signers to non-signers and then back to signers in May 1986. Financial incentives and disincentives were often important reasons for these physicians who changed their mind. Non-participants decided to sign the agreement to obtain an increase in the amount Medicare would pay after the freeze was lifted. Physicians deciding not to renew the agreement felt the most important reason was the perceived government double cross when the fee freeze was extended.

No dramatic changes were found with the January 1987 participation decision. From May 1986 to January 1987, only 7 percent of non-signers became signers and 4 percent of signers decided not to renew the agreement (Table 5-3). The two most common reasons cited by previous non-participants for signing the agreement in January 1987 were to reduce administrative burden and because physicians "felt forced" by the government. Among those who changed from signers to non-signers, the most important factor was low or unpredictable payments, followed by a change in practice situation (e.g., retirement, new employer).

Participation rates clearly vary by type of employment arrangement. For example, in January 1987, participation rates of self-employed physicians (37 percent) were about 20 percentage points lower than those employed by hospitals or universities (57 percent) and about 10 percentage points lower than those employed by an HMO or clinic (46 percent) or another physician or corporation (44 percent).

Assignment rates were compared between 1985 and 1987 to determine whether the participation program has had a substantial impact on assignment among participants as well as non-participants. Overall, assignment rates increased about 2 percent, from 53.0 percent to 53.9 percent, although this was not a significant change (Table 5-4). These figures are based on data from the original 1983 Physicians' Practice Costs and Income Survey and the 1987 Physicians' Practice Follow-up Survey, and include only physicians who were self-employed in the original survey. The assignment rates reflect the percent of current Medicare caseloads accepted on assignment and are not weighted by covered charges or Medicare volumes. Surgeons had the highest assignment rates and physicians in three surgical specialties (ophthalmology, urology, and obstetrics/gynecology) had the highest rates of increase in assigned caseloads. Only general practitioners had a large decline, probably due in part to a high proportion dropping out of the participating physician program.



TABLE 5-3

RELATIONSHIP BETWEEN PREVIOUS PARTICIPATION DECISIONS AND THE JANUARY 1987  
DECISION<sup>a</sup>

<u>Previous Decisions</u>	<u>JANUARY 1987 DECISION</u>	
	<u>Percent Signers</u>	<u>Percent Non-Signers</u>
Signer throughout	96.3%	3.7%
Non-signer throughout	7.1	92.9
Signer to non-signer	7.9	92.1
Non-signer to signer	91.4	8.7
Signer/non-signer/signer	96.5	3.5

<sup>a</sup>Rows sum to 100 percent.

Source: 1987 Physicians' Practice Follow-up Survey.



TABLE 5-4

ASSIGNMENT RATES BY SPECIALTY, 1985-1987<sup>a</sup>

	<u>Mean Assignment Rate</u>		<u>Percent Change</u>
	1985	1987	
All physicians	53.0%	53.9%	1.8%
General practice	45.7	40.4	-11.6
Family practice	51.5	51.4	-0.1
Internal medicine	40.7	40.3	-0.9
Cardiology	61.3	64.9	5.8
Other medical specialties	58.0	58.7	1.2
General surgery	63.9	65.1	1.8
Orthopedic surgery	56.5	58.3	3.1
Ophthalmology	47.3	53.1	12.2
Urology	54.2	59.6	9.8
Obstetrics/gynecology	60.2	64.7	7.5
Other surgical specialties	57.3	56.9	-0.7
Anesthesiology	38.6	40.0	3.8
Radiology	67.2	69.3	3.2

<sup>a</sup>These assignment rates represent the percent of the physician's Medicare caseload accepted on assignment. Mean assignment rates were compared within specialty and some of the differences between 1985 and 1987 were found to be significant at the 0.05 level.

Source: 1987 Physicians' Practice Follow-up Survey.





Of particular interest is the impact of the participation program on non-participants' assignment rates (Table 5-5). Has the threat of competition from participants forced them to increase their assignment rates? From 1985 to 1987, non-participating physicians significantly increased their assignment rates from 24 percent to nearly 30 percent, a 24 percent gain.

We highlighted one group of non-participating physicians, known as the de facto participants because they accept all cases on assignment even though they have not signed the participation agreement. About 6 percent of non-participants are de facto participants. Surgeons are disproportionately represented among de facto participants compared to medical specialists and general/family practitioners. This may reflect a desire to keep their billing options open, rather than be locked into the participation agreement. Physicians with small Medicare caseloads (less than 10 percent of patients) also account for a higher share of de facto participants. In general, what seems to be dominating their motivation for not signing is a philosophical opposition to the terms of the participation agreement, particularly the belief that physicians should set their own fees.



TABLE 5-5

## ASSIGNMENT RATES BY DECISION PATTERN, 1985-1987

	<u>MEAN ASSIGNMENT RATE<sup>a</sup></u>		Percent Change
	1985	1987	
All Physicians	53.0	53.9	1.8
Signer throughout	100.0%	100.0%	0.0%
Non-signer throughout	23.9	29.7 <sup>b</sup>	24.1
Signer to non-signer	100.0	28.5 <sup>b</sup>	-71.5
Non-signer to signer	44.5	100.0 <sup>b</sup>	125.7
Signer/non-signer/signer	100.0	100.0	0.0

<sup>a</sup>These assignment rates represent the percent of the physician's Medicare caseload accepted on assignment.

<sup>b</sup>Assignment rates for 1985 and 1987 are significantly different at 0.05 level.

Source: 1987 Physicians' Practice Follow-up Survey.



## REFERENCES

Bowen, OR, Pacemaker Surgery and Medicare Physician Payment: Report to Congress. DHHS, 1987.

Chiang, AC, Fundamental Methods of Mathematical Economics, 2nd ed.: New York: McGraw-Hill Co., 1974, 404-10.

Congressional Budget Office, Physician Reimbursement Under Medicare: Options for Change, Washington, D.C.: CBO, April, 1986.

Duan, N, Manning, W, Morris, C, and Newhouse, J, A Comparison of Alternative Models for the Demand for Medical Care. Report No. R-2754-HHS. January, 1982, Appendix B.

Guilford, JD, Fruchter, B, Fundamental Statistics in Psychology and Education, 5th ed., New York: McGraw-Hill Co., 1973.

Health Care Financing Administration, Health Care Spending Bulletin, No. 85-02, April 1985.

Hsiao, WC, and Stason, W, Toward Developing a Relative Value Scale for Medical and Surgical Services. Health Care Financing Review. Fall, 1979, 23-38.

Hsiao, WC, et al., Resource-Based Relative Values of Selected Medical and Surgical Procedures in Massachusetts. Harvard School of Public Health, December 1985.

Kmenta, J, Elements of Econometrics. New York: The MacMillan Co., 1971; 363.

Mitchell, JB, Cromwell, J, Stason, WB, and Posner, J, Learning by Doing: Productivity Gains for Surgeons Performing CABGs, HCFA Report No. 1-8C-98758/1-03, December, 1987b.

Mitchell, JB, et al., Are Some Surgical Procedures Overpaid? Health Affairs 6, Summer 1987a, 121-31.

Office of Technology Assessment, Medicare's Prospective Payment System: Strategies for Evaluating Cost, Quality, and Medical Technology, Washington, D.C.: OTA, 1985.

U.S. Congress, Office of Technology Assessment. Payment for Physician Services: Strategies for Medicare. OTA-H-294. Washington, D.C.: U.S. Government Printing Office, February, 1986.

U.S. General Accounting Office, Medical Malpractice: No Agreement on the Problems or Solutions, GAO/HRD-86-50, 1986.

U.S. House of Representatives, Committee on Interstate and Foreign Commerce, Subcommittee on Health and the Environment, A Discursive Dictionary of Health Care, U.S. Government Printing Office, Washington, D.C., February 1976.

Zuckerman, Stephen, Claims, Legal Costs and the Practice of Defensive Medicine, Health Affairs, 3, Fall 1984, 128-33.





APPENDIX A  
SURVEY INSTRUMENTS



PHYSICIANS' PRACTICE FOLLOW-UP SURVEY

CASE ID:

--	--	--	--	--	--	--

Hello. My name is \_\_\_\_\_. I am calling from NORC, a social science research center affiliated with the University of Chicago. In 1984 you participated in our survey of physicians' practices. I believe you received a copy recently of a report of that study, and we want you to know that we appreciate your cooperation then. At this time we are conducting a short follow-up telephone interview with doctors who participated in our 1984 survey. If possible I would like to do that interview with you now. The interview will take about 15 minutes. (Or I can call you whenever you prefer. What would be a good time?)

Before we begin, I assure you that the confidentiality of your answers will be absolutely protected in compliance with the Federal Privacy Act. All identifying information is removed prior to release of any data. Your responses will be merged with those of other cooperating physicians for statistical analyses only. Further, your participation in the survey as a whole is strictly voluntary--even to the extent that you may choose not to answer specific questions while responding to others.

(The funding for this study comes from the Department of Health and Human Services - specifically from the Office of the Assistant Secretary for Planning and Evaluation jointly with the Health Care Financing Administration.)



BACKGROUND

First, I'd like to ask you a few basic questions about your practice.

1. Your primary specialty is (SPECIALTY FROM INFORMATION SHEET). Is that right?

Yes.....(SKIP TO Q.3)..... 1

No.....(ASK Q.2)..... 2

2. What is your specialty? RECORD VERBATIM.

---

3. In any part of 1986, did you spend at least 20 hours a week providing patient care?

Yes.....(GO TO Q.4)..... 1

No.....(ASK A)..... 2

3A. At the time of the 1984 survey, you said you spent 20 hours a week or more providing patient care, and we're interested in finding out why your situation has changed. Please tell me a little bit about that--for example, have you assumed other responsibilities and duties, have you retired, or what?  
RECORD VERBATIM.

---

---

TERMINATE INTERVIEW.

DOCTOR, THANK YOU SO MUCH FOR YOUR COOPERATION. HOWEVER, THIS IS A SURVEY OF PHYSICIANS WHO PROVIDED PATIENT CARE FOR AT LEAST 20 HOURS A WEEK FOR AT LEAST 6 MONTHS DURING 1986. THANKS AGAIN FOR YOUR TIME.

GOOD-BYE





4. Are you currently employed by a hospital or university, by a clinic or HMO, by another private physician or corporation, or are you self-employed? Consider yourself to be self-employed if you are a partner in a partnership or a part-owner in a corporation. If more than one of these applies to you, please be sure to mention each.

4RETIRED. IF VOLUNTEERED "RETIRED":

Were you providing patient care for at least 20 hours a week for at least 6 months during 1986?

Yes.....(ASK 4STATUS BELOW)..... 1

No.....(TERMINATE INTERVIEW)..... 2

DOCTOR, THANK YOU SO MUCH FOR YOUR COOPERATION. HOWEVER, THIS IS A SURVEY OF PHYSICIANS WHO PROVIDED PATIENT CARE FOR AT LEAST 20 HOURS A WEEK FOR AT LEAST 6 MONTHS DURING 1986. THANKS AGAIN FOR YOUR TIME.

GOOD-BYE.

4STATUS. INTERVIEWER: IF RESPONDENT VOLUNTEERS MORE THAN ONE EMPLOYMENT STATUS,  
CIRCLE ALL THAT APPLY AND PROBE: Now, I would like you to give me a rough approximation of how your time is spent.

IF MORE THAN ONE EMPLOYMENT STATUS:  
What percent of your time is usually spent (EACH CIRCLED)?

	Applies	Does not Apply	PERCENT:
(a) Employed by a hospital or university.....	1	2	-----
(b) Employed by a clinic or HMO.....	1	2	-----
(c) Employed by another physician or a corporation.....	1	2	-----
(d) Self-employed, as a partner in a partnership, or as part-owner in a corporation.....	1	2	-----
(e) Other (SPECIFY)_____	1	2	-----
			=====
			100%

INTERVIEWER: REVIEW PERCENTAGES; IF THEY DO NOT ADD UP TO 100%,  
RECONCILE WITH DOCTOR.



5. Is that the same as your employment situation during 1986?

Yes.....(GO TO Q.6)..... 1

No.....(ASK Q.5A)..... 2

A. During 1986, were you employed by a hospital or university, by a clinic or HMO, by another private physician, or were you self-employed? Consider yourself to have been self-employed if you were a partner in a partnership or a part-owner in a corporation. If more than one of these applies to you, please be sure to mention each.

INTERVIEWER: IF RESPONDENT VOLUNTEERS MORE THAN ONE EMPLOYMENT STATUS

CIRCLE ALL THAT APPLY AND PROBE: Now, I would like you to give me a rough approximation of how your time was spent then.

IF MORE THAN ONE EMPLOYMENT STATUS:

What percent of your time was usually spent (EACH CIRCLED)?

	Applies	Does not Apply	PERCENT:
(a) Employed by a hospital or university.....	1	2	-----
(b) Employed by a clinic or HMO.....	1	2	-----
(c) Employed by another physician or a corporation.....	1	2	-----
(d) Self-employed, as a partner in a partnership or as part-owner in a corporation.....	1	2	-----
(e) Other (SPECIFY)_____	1	2	-----
<hr/>			<hr/> <hr/> 100%

INTERVIEWER: REVIEW PERCENTAGES; IF THEY DO NOT ADD UP TO 100%,  
RECONCILE WITH DOCTOR.

6. INTERVIEWER: WAS DOCTOR EMPLOYED SOLELY BY A HOSPITAL IN 1986?  
(IS Q.4a=1 AND Q.4b-4e=2 AND Q.5=1, OR Q.5a=1 AND Q.5b-5e=2)?

YES.....(SKIP TO Q.9A)..... 1

NO.....(GO TO Q.7)..... 2

7. During 1986, how many physicians including yourself were formally associated with your practice for at least 20 hours a week? PROBE FOR MAIN PLACE OF EMPLOYMENT.

PHYSICIANS

8. During 1986, how many other physicians were associated with your practice for less than 20 hours a week? PROBE FOR MAIN PLACE OF EMPLOYMENT.

PHYSICIANS



8CRNA. ANESTHESIOLOGISTS ONLY: During 1986, how many Certified Registered Nurse Anesthetists were employed by your practice?

CRNA's

9. In 1986, what was (your personal gross income from medical practice/the gross income from the entire medical practice) before practice deductions and taxes?

A. ENTER EXACT AMOUNT IF GIVEN:

B. IF DON'T KNOW, PROBE: We just need a range. Was it . . .

LESS THAN 60,000.....01

\$60,000 TO LESS THAN \$80,000.....02

\$80,000 TO LESS THAN \$100,000.....03

\$100,000 TO LESS THAN \$125,000....04

\$125,000 TO LESS THAN \$150,000....05

\$150,000 TO LESS THAN \$175,000....06

\$175,000 TO LESS THAN \$200,000....07

\$200,000 TO LESS THAN \$250,000....08

\$250,000 TO LESS THAN \$300,000....09

\$300,000 TO LESS THAN \$350,000....10

\$350,000 TO LESS THAN \$400,000....11

\$400,000 TO LESS THAN \$450,000....12

\$450,000 TO LESS THAN \$500,000....13

\$500,000 TO LESS THAN \$600,000....14

\$600,000 TO LESS THAN \$700,000....15

\$700,000 TO LESS THAN \$800,000....16

\$800,000 TO LESS THAN \$900,000....17

\$900,000 TO LESS THAN \$1,000,000..18

\$1,000,000 OR OVER.....(ASK C)....19

C. About how much was that? \$ \_\_\_\_\_

INTERVIEWER: IF R CANNOT PROVIDE 1986 INCOME YET, PROBE FOR 1985 INCOME, ENTER AMOUNT ABOVE AND CODE IN D1 BELOW.

D1. DID R PROVIDE INCOME FOR 1986 OR 1985?

1986.....86

1985.....85

D2. INTERVIEWER: DID R PROVIDE...

PRACTICE GROSS.....1  
PERSONAL GROSS.....2

PERSONAL NET.....3  
OTHER (SPECIFY)...4







MALPRACTICE

INTERVIEWER: SEE Q.9D1. IN THIS SECTION, USE "1986" IF R REPORTED 1986 INCOME. USE "1985" IF R REPORTED 1985 INCOME.

Now I'd like to ask you a few questions about malpractice insurance.

10A. First, how much did you or your practice pay in premiums, for your own malpractice insurance, during (1986/1985)? \$ \_\_\_\_\_

10B. Did your hospital pay any premiums, for your own malpractice insurance, during (1986/1985)?

Yes.....(ASK Q.10C)..... 1

No.....(SKIP TO Q.11)..... 2

10C. How much did your hospital pay on your behalf in premiums, during (1986/1985)? \$ \_\_\_\_\_

IF Q.10A CODED "0" AND Q.10B CODED "NO," ASK Q.11; OTHERWISE SKIP TO Q.12.

11. During (1986/1985) did your hospital provide you with coverage through a self-insurance program or were you not insured?

Hospital provided coverage...(GO TO Q.12)... 1

Not insured.....(ASK A)..... 2

A. In what year did you discontinue your malpractice coverage?

1	9		
---	---	--	--

IF VOLUNTEERED: Never insured..... 1

SKIP TO Q.16



INTERVIEWER: IN THE FOLLOWING QUESTIONS THE DOCTOR MAY GIVE YOU LIMIT PER CASE AND TOTAL LIMIT COMBINED (E.G. 100/300, 200/500). LIMIT PER CASE IS USUALLY FIRST, AND SHOULD BE SMALLER THAN TOTAL LIMIT. ALWAYS PROBE TO RESOLVE AMBIGUITIES.

12. What was the limit per case on your malpractice liability coverage for (1986/1985)? \$ \_\_\_\_\_
13. And what was the total limit on your malpractice liability coverage for (1986/1985)? \$ \_\_\_\_\_
14. What was the limit per case on your malpractice liability coverage for 1983? \$ \_\_\_\_\_

IF "DON'T KNOW" TO Q.14, ASK Q.14A. OTHERWISE GO TO Q.15.

14A. Between 1983 and (1986/1985), did the limit per case on your malpractice liability coverage increase, decrease, or stay the same?

Increased..... 1

Decreased..... 2

Same as 1983..... 3

15. And what was the total limit on your malpractice liability coverage for 1983? \$ \_\_\_\_\_

IF "DON'T KNOW" TO Q.15, ASK Q.15A. OTHERWISE, GO TO Q.16.

15A. Between 1983 and (1986/1985), did the total limit on your malpractice liability coverage increase, decrease, or stay the same?

Increased..... 1

Decreased..... 2

Same as 1983..... 3



16. Have you ever had any problems with the availability of malpractice insurance? (IF YES, PROBE: What problems have you had?)

Yes (SPECIFY) \_\_\_\_\_ 1

---

---

---

No.....2

- 17A. Since this time last year, have you discontinued performing certain high-risk procedures because of malpractice insurance costs? (IF YES, PROBE: What procedures have you discontinued?)

Yes (SPECIFY) \_\_\_\_\_ 1

---

---

---

No.....2

- 17B. Since this time last year, have you discontinued seeing certain types of cases because of malpractice insurance costs? (IF YES, PROBE: What types of cases have you discontinued?)

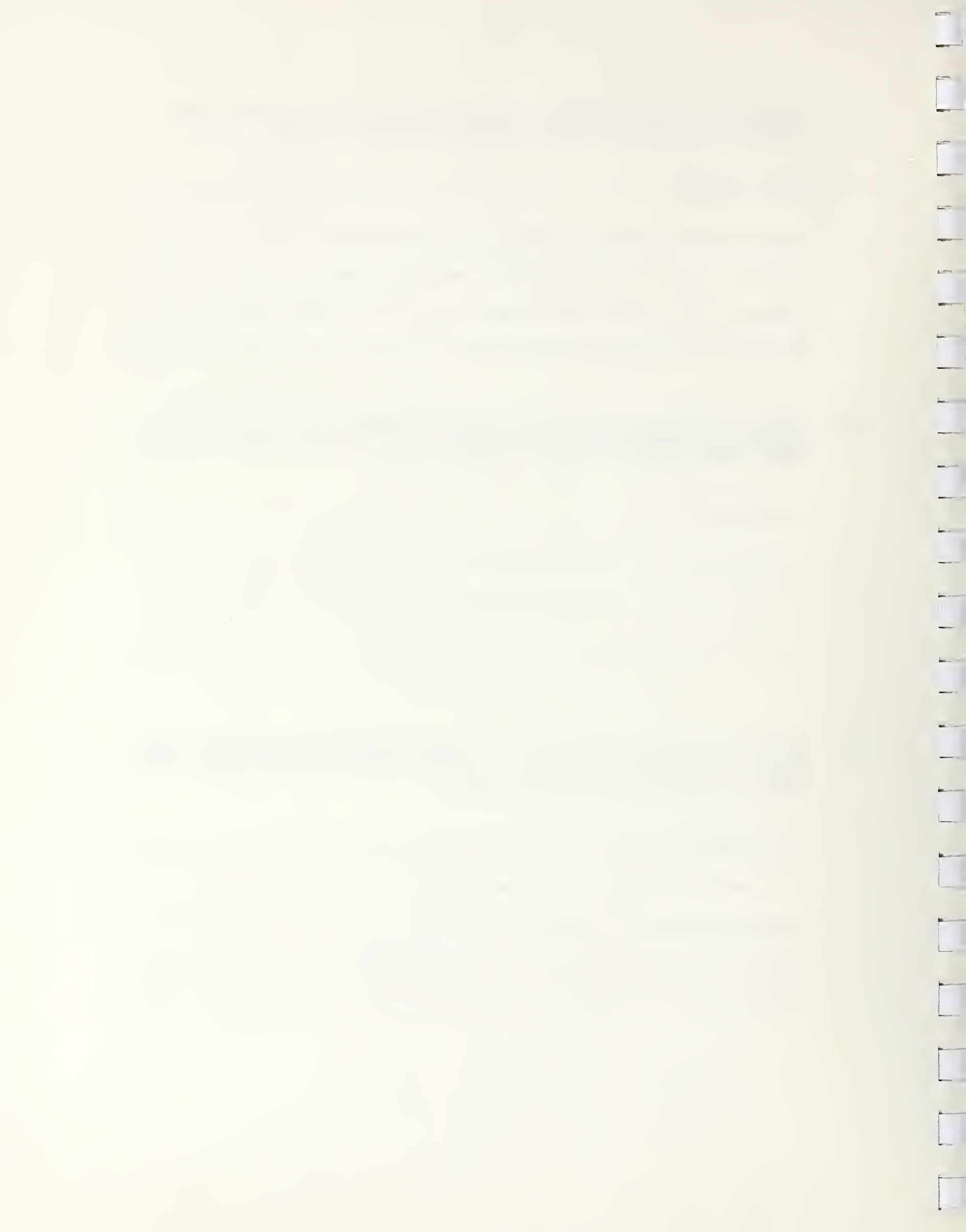
Yes (SPECIFY) \_\_\_\_\_ 1

---

---

---

No.....2





PARTICIPATING PHYSICIANS' AGREEMENT (PPA)

Now, I'd like to ask you a few questions about your Medicare caseload.

18. About what percent of your current patient load has Medicare, Part B as the primary payer? (IF DON'T KNOW, PROBE FOR RANGE. 0-5%, 5-10%, 10-15%, ETC.) PROBE FOR MAIN PLACE OF EMPLOYMENT.

\_\_\_\_\_ %

19. In 1984, Congress enacted legislation concerning Medicare patients and assignment of benefits. Physicians were given an opportunity to sign an agreement to accept assignment of benefits for all their Medicare patients.

INTERVIEWER: SEE INFORMATION SHEET FOR "PPA STATUS 1984". IF "MISSING", ASK A, OTHERWISE GO TO B AND READ "SIGNED/DID NOT SIGN" AS APPROPRIATE.

A. IF PPA STATUS 1984 "MISSING":

Did you sign the agreement in October, 1984?

Yes.....(SKIP TO Q.19C).....1

No.....(SKIP TO Q.20).....2

B. IF PPA STATUS 1984 "SIGNED" OR "DID NOT SIGN":

During the previous interview you reported that you (signed/did not sign) the agreement in October 1984. Is that correct?

Yes.....1

No.....2

C. 1984 SIGNERS ONLY: (Q72 [1984] = 1 OR Q.19A = 1); OTHERWISE SKIP TO Q.20.

Prior to signing the Participating Physicians' Agreement in October, 1984, what percent of your Medicare caseload did you accept on assignment? (PROBE: Where the government pays you directly. IF DON'T KNOW, PROBE FOR RANGE. 0-10%, 10-20%, 20-30%, ETC.)

\_\_\_\_\_ %

ASK ALL PHYSICIANS:

20. Since that initial decision in October, 1984, you have had at least two other opportunities to sign the Medicare Participating Physicians' Agreement.

Did you sign the Agreement for the period beginning October, 1985?

Yes.....1

No.....2

21. Did you sign in May, 1986?

Yes.....1

No.....2



INTERVIEWER:

SIGNERS GO TO Q22, PAGE 9.

(IF PPA 1984/Q19A = 1, Q20 = 1 AND Q21 = 1)

NON-SIGNERS SKIP TO Q23, PAGE 10.

(IF PPA 1984/Q19A = 2, Q20 = 2, AND Q21 = 2)

SIGNERS TO NON-SIGNERS SKIP TO Q24, PAGE 11.

(IF PPA 1984/Q19A = 1, Q20 = 2, AND Q21 = 2

OR

IF PPA 1984/Q19A = 1, Q20 = 1, AND Q21 = 2)

NON-SIGNERS TO SIGNERS SKIP TO Q25, PAGE 12.

(IF PPA 1984/Q19A = 2, Q20 = 1, AND Q21 = 1

OR

IF PPA 1984/Q19A = 2, Q20 = 2, AND Q21 = 1)

FLIP-FLOPPERS SKIP TO Q26, PAGE 13.

(IF PPA 1984/Q19A = 1, Q20 = 2, AND Q21 = 1

OR

IF PPA 1984/Q19A = 2, Q20 = 1, AND Q21 = 2)



SIGNERS: (Q72 [1984] = 1 OR Q19A = 1 AND Q20 = 1 AND Q21 = 1)

22. I will read some reasons doctors have given us for signing the agreement. For each one, please tell me how important that was in your decision to sign--very important, somewhat important, or not important.

	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>
A. Your colleagues suggested that you sign?	1	2	3
B. You were accepting most cases on assignment anyway?	1	2	3
C. You thought it would help increase your patient load?	1	2	3
D. To reduce paperwork and administrative burden?	1	2	3
E. To have the same charges for Medicare and non-Medicare patients during the fee freeze?	1	2	3
F. To increase the amount Medicare would pay at the end of the freeze?	1	2	3
G. To obtain the differential payment for participating physicians after the fee freeze was lifted?	1	2	3
H. It was advantageous to your patients?	1	2	3
I. Were there any other reasons that were <u>very important</u> in your decision to sign the agreement? RECORD VERBATIM.	YES (SPECIFY BELOW) 1  _____	NO (GO TO J) 2  _____	

IF Q.22C = 1 or 2:

J. Did your Medicare patient load increase, decrease, or remain the same as a result of signing the agreement?

Increased.....1

Decreased.....2

Remained the same...3

GO TO Q.27





NON-SIGNERS: (Q72 [1984] = 2 OR Q19A = 2 AND Q20 = 2 AND Q21 = 2)

23. I will read some reasons doctors have given us for not signing the agreement. For each one, please tell me how important that was in your decision not to sign--very important, somewhat important, or not important.

	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>
A. Your colleagues decided not to sign?	1	2	3
B. You have few Medicare patients?	1	2	3
C. You wanted to be able to balance bill your patients?	1	2	3
D. You feel that physicians should establish their own fees?	1	2	3
E. You feel there is no particular advantage to signing?	1	2	3
F. Were there any other factors that were <u>very important</u> in your decision not to sign the agreement? RECORD VERBATIM.	YES (SPECIFY BELOW) 1	NO (GO TO G) 2	
	_____		
	_____		
G. What percent of your current Medicare caseload is accepted on assignment?	<div style="border: 1px solid black; display: inline-block; width: 80px; height: 20px; vertical-align: middle;"></div>		

GO TO Q.27



SIGNER TO NON-SIGNER: (Q72 [1984] = 1 OR Q19A = 1 AND Q20 = 2 AND Q21 = 2  
OR Q72 [1984] = 1 OR Q19A = 1 AND Q20 = 1 AND Q21 = 2)

24. I will read some reasons doctors have given us for deciding not to renew the agreement after initially signing it. For each one, please tell me how important that was in your decision not to renew the agreement--very important, somewhat important, or not important.

	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>
A. Your patient load didn't increase as much as anticipated?	1	2	3
B. The agreement didn't reduce the amount of paperwork or administrative burden?	1	2	3
C. You wanted to be able to balance bill your patients?	1	2	3
D. The fee freeze was extended beyond the original date?	1	2	3
E. Were there any other reasons that were <u>very important</u> in your decision not to renew the agreement? RECORD VERBATIM.	YES (SPECIFY BELOW) 1	NO (GO TO F) 2	
	_____		
	_____		
F. What percent of your current Medicare caseload is accepted on assignment?	<div style="display: inline-block; border: 1px solid black; width: 40px; height: 20px; margin: 0 5px;"></div> <div style="display: inline-block; border: 1px solid black; width: 40px; height: 20px; margin: 0 5px;"></div> <div style="display: inline-block; border: 1px solid black; width: 40px; height: 20px; margin: 0 5px;"></div>		

GO TO Q.27



NON-SIGNER TO SIGNER: (Q72 [1984] = 2 OR Q19A = 2 AND Q20 = 1 AND Q21 = 1  
OR Q72 [1984] = 2 OR Q19A = 2 AND Q20 = 2 AND Q21 = 1)

25. I will read some reasons doctors have given us for deciding to sign the agreement after initially deciding not to sign. For each one, please tell me how important that was in changing your decision about signing the agreement--very important, somewhat important, or not important.

	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>
A. Your colleagues suggested that you sign?	1	2	3
B. You were accepting most cases on assignment anyway?	1	2	3
C. You thought it would help increase your patient load?	1	2	3
D. To reduce paperwork and administrative burden?	1	2	3
E. To obtain the differential payment for participating physicians after the fee freeze was lifted?	1	2	3
F. It was advantageous to your patients?	1	2	3

ASK ONLY IF Q72 [1984]=2 OR Q19A = 2 AND Q20 = 1 AND Q21 = 1.  
OTHERWISE, SKIP TO H.

G. To have the same charges for Medicare and non-Medicare patients during the fee freeze?	1	2	3
H. To increase the amount Medicare would pay at the end of the freeze?	1	2	3

ASK ALL NON-SIGNERS TO SIGNERS:

I. Were there any other reasons that were <u>very important</u> in changing your decision to sign the agreement? RECORD VERBATIM.	YES (SPECIFY BELOW) 1	NO (GO TO J) 2
	_____	_____

IF Q25C = 1 or 2:

J. Did your Medicare patient load increase, decrease, or remain the same as a result of signing the agreement?

Increased.....1	}	GO TO Q.27
Decreased.....2		
Remained the same...3		





FLIP-FLOPPERS (All others: Q72[1984]=1 OR Q19A=1, Q20=2, and Q21=1 or  
Q72[1984]=2 OR Q19A=2, Q20=1, and Q21=2)

26. Please tell me what factors were very important in your decision to sign the agreement in some periods but not in others? PROBE FOR EACH DECISION. RECORD VERBATIM.
- 
- 

ALL PHYSICIANS:

27. You recently had another opportunity to sign the Participating Physicians' Agreement.

Did you sign for the period beginning January, 1987?

Yes.....(GO TO Q.27A).....1

No.....(GO TO Q.27A).....2

DON'T KNOW...(SKIP TO Q.28)...8

- A. INTERVIEWER: DID R SIGN IN MAY, 1986? RECORD ANSWER FROM Q.21.

YES.....1

NO.....2

- B. IF JAN., 1987 DECISION DIFFERENT FROM DECISION IN MAY, 1986 (Q21):

Please tell me what factors were very important in changing your decision to sign between May of 1986 and January of 1987. RECORD VERBATIM.

---

---

---



PHYSICIANS' PRACTICE FOLLOW-UP SURVEY  
(TIME AND COMPLEXITY)

NOTE: A separate booklet was prepared for each specialty,  
with services and procedures specific to that specialty.  
This booklet illustrates the questions for urology.

CASE ID:

--	--	--	--	--	--	--



THIS PAGE IS INTENTIONALLY BLANK





TIME AND COMPLEXITY

28. Now I'd like to ask you about the time involved in performing several procedures and services for a typical patient. Enclosed with the letter we sent you was a blue card listing several procedures. Do you have that card handy? (IF NO: I'll read you the list of procedures. As I read each procedure, it will be helpful for you to write it down so that you will have it for the next set of questions.)

INTERVIEWER: DID R HAVE BLUE CARD AVAILABLE? YES....1  
NO.....2

INTERVIEWER: FOR EACH PROCEDURE ASK 1. ASK 2, 3, 4, AND 5 AS APPROPRIATE. FOR QUESTIONS 2-5, PROBE AS NECESSARY: "FOR A TYPICAL PATIENT" OR "ON AVERAGE." THEN GO TO NEXT PROCEDURE.

1. In the past year, how often have you personally performed a/an (PROCEDURE) . . . ?

Procedure (SP = SURGICAL PROCEDURE)	At least once a week	Once a month	Less than once a month but at least once in the past year	Not in the past year	Or never
A. Initial comprehensive <u>office</u> visit for a new patient (CPT-4 90020)	1	2	3	4	5
B. Initial comprehensive <u>hospital</u> visit (with history and examination) for a new or established patient (CPT-4 90220)	1	2	3	4	5
C. Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)	1	2	3	4	5
D. Intravenous urography (pyelography) (CPT-4 74400)	1	2	3	4	5
E. Transurethral resection of the prostate (TURP) (CPT-4 52601) SP	1	2	3	4	5
F. Suprapubic prostatectomy (CPT-4 55821) SP	1	2	3	4	5
G. Lithotripsy (Percutaneous nephrostolithotomy or pyelostolithotomy, up to 2 cm) (CPT-4 50080)	1	2	3	4	5
H. Cystourethroscopy (separate procedure) (CPT-4 52000)	1	2	3	4	5
I. Cystourethroscopy with ureteral catheterization (CPT-4 52005)	1	2	3	4	5
J. Cystourethroscopy with fulguration (including cryosurgery) and/or resection of small bladder tumor(s) (0.5 to 2 cm) (CPT-4 52234)	1	2	3	4	5
K. Dilation of urethra for a female patient (CPT-4 53660)	1	2	3	4	5



IF Q.1 = 1, 2, OR 3, ASK Qs. 2-5  
OTHERWISE, GO TO NEXT PROCEDURE.

2. How many minutes do you spend providing in-hospital pre-operative care for this procedure?	3. For a typical patient in your practice, please estimate, on average, how long a/an (PROCEDURE) actually takes to perform. (PROBE: "ON AVERAGE")	4. Altogether, how many minutes do you spend providing in-hospital post-operative care for this procedure? (PROBE FOR 1ST PROCEDURE: In providing the estimate please think about the number of visits you usually provide and the length of each visit.)	5. Altogether, how many minutes do you spend providing post-hospital care for this procedure?
X X X X X X X	_ _  HRS  _ _ _  MIN	X X X X X X X	X X X X X X X
X X X X X X X	_ _  HRS  _ _ _  MIN	X X X X X X X	X X X X X X X
X X X X X X X	_ _ _  MIN	X X X X X X X	X X X X X X X
X X X X X X X	_ _  HRS  _ _ _  MIN	X X X X X X X	X X X X X X X
_ _  HRS  _ _ _  MIN	_ _  HRS  _ _ _  MIN	_ _  HRS  _ _ _  MIN	_ _  HRS  _ _ _  MIN
_ _  HRS  _ _ _  MIN	_ _  HRS  _ _ _  MIN	_ _  HRS  _ _ _  MIN	_ _  HRS  _ _ _  MIN
X X X X X X X	_ _  HRS  _ _ _  MIN	X X X X X X X	X X X X X X X
X X X X X X X	_ _  HRS  _ _ _  MIN	X X X X X X X	X X X X X X X
X X X X X X X	_ _  HRS  _ _ _  MIN	X X X X X X X	X X X X X X X
X X X X X X X	_ _  HRS  _ _ _  MIN	X X X X X X X	X X X X X X X
X X X X X X X	_ _  HRS  _ _ _  MIN	X X X X X X X	X X X X X X X



IF Q.28-1 = 1, 2, OR 3, ASK Q.29 FOR PROCEDURE, OTHERWISE GO TO NEXT PAGE.

Now I would like to ask you about the anesthesia for one surgical procedure.  
(Please add it to your list.)

29. A. Over and above the time a transurethral resection of the prostate (TURP) actually takes to perform, please estimate how much time is spent providing the anesthesia, from induction until the patient leaves the O. R. (PROBE: "For a typical patient" or "on average.")

HRS

MIN





THIS PAGE IS INTENTIONALLY BLANK



30. Some procedures and services take a long time but are relatively straight-forward. Others are very brief but require extraordinary skill and concentration.

I'd like you to rank each of the procedures and services on the list according to its relative complexity, independent of the time it takes to perform the procedure. In ranking the procedures consider only services rendered during the actual procedure. Please take into account:

the judgment required to choose the appropriate approach,  
the level of technical skill required,  
the degree of effort involved--both mental and physical effort--and,  
the amount of emotional stress incurred as a result of diagnostic uncertainty or the amount of risk.

- A. Looking at the list, which of the procedures or services on the list, regardless of time considerations, is the most complex or difficult to perform (whether or not you personally perform any or all of these procedures)? RECORD PROCEDURE NUMBER FROM Q.31.

PROCEDURE #:   ---> ENTER "100" NEXT TO  
PROCEDURE IN Q. 31.

- B. Which of the procedures and services on the list is the least complex to perform? RECORD PROCEDURE NUMBER FROM Q.31.

PROCEDURE #:

- C. On a scale of 1 to 100, let's assign a rank of 100 to (READ PROCEDURE FROM Q.30A), which you selected as the most complex or difficult procedure on the list. Now, how would you rank the complexity of (READ PROCEDURE FROM Q.30B), on that same scale? For example, if you think that (READ FROM Q.30B) is half as difficult as (READ FROM Q.30A), then you would assign it a rank of 50; if you think it is one-fifth as difficult you would give it a rank of 20; if you think it is on the extreme other end of the complexity scale you might give it some rank less than 5. In other words, please use the full range of the scale from 1 to 100.

RANK FROM 1 TO 100:    ---> ALSO ENTER IN Q.31



31. Now please rank the other procedures and services on the list between (READ RANK FROM 30C) and 100, in relation to the procedures you have just mentioned.

PROCEDURE:

What is the relative complexity of a/an (PROCEDURE)?

- |   |       |
|---|-------|
| 1. Initial comprehensive <u>office</u> visit for a new patient (CPT-4 90020)  | RANK: |
| 2. Initial comprehensive <u>hospital</u> visit (with history and examination) for a new or established patient (CPT-4 90220)          | RANK: |
| 3. Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)  | RANK: |
| 4. Intravenous urography (pyelography) (CPT-4 74400)  | RANK: |
| 5. Transurethral resection of the prostate (TURP) (CPT-4 52601) SP  | RANK: |
| 6. Suprapubic prostatectomy (CPT-4 55821) SP  | RANK: |
| 7. Lithotripsy (Percutaneous nephrostolithotomy or pyelostolithotomy, up to 2 cm) (CPT-4 50080)                                       | RANK: |
| 8. Cystourethroscopy (separate procedure) (CPT-4 52000)   | RANK: |
| 9. Cystourethroscopy with ureteral catheterization (CPT-4 52005)  | RANK: |
| 10. Cystourethroscopy with fulguration (including cryosurgery) and/or resection of small bladder tumor(s) (0.5 to 2 cm) (CPT-4 52234) | RANK: |
| 11. Dilation of urethra for a female patient (CPT-4 53660)  | RANK: |
| 12. Anesthesia for a transurethral resection of the prostate (TURP) (CPT-4 52601)   | RANK: |

INTERVIEWER CHECK: Review (starting with the least complex) rankings with respondent.





FOR EACH PROCEDURE, ASK ONLY IF Q.28-1 = 1, 2, OR 3.

32. The next few questions concern your usual billing practices for surgical procedures.

ASK ONLY IF Q.28-1 = 1, 2, OR 3 FOR PROCEDURE.

		28.E TURP	28.F Suprapubic prostatectomy						
1. Does your global surgical bill for a/an (PROCEDURE) include the pre-hospital office visit in which the decision to operate is made?	Yes	1	1						
	No	2	2						
		↓	↓						
2. How many post-hospital office visits do you typically provide for a/an (PROCEDURE)? IF Q.2 = 0, SKIP TO Q.5.	No. of Visits	<table border="1" style="display: inline-table; width: 60px; height: 30px;"><tr><td></td><td></td></tr></table>			<table border="1" style="display: inline-table; width: 60px; height: 30px;"><tr><td></td><td></td></tr></table>				
		↓	↓						
3. How many of these (post-hospital office) visits are included in your surgical bill for a (PROCEDURE)? (PROBE: "Not billed separately.") IF Q.3 = 0, SKIP TO Q.5.	No. of Visits	<table border="1" style="display: inline-table; width: 60px; height: 30px;"><tr><td></td><td></td></tr></table>			<table border="1" style="display: inline-table; width: 60px; height: 30px;"><tr><td></td><td></td></tr></table>				
		↓	↓						
4. For what period of time are post-hospital office visits included in the surgical bill for a (PROCEDURE)? ENTER NUMBER OF DAYS, WEEKS, ETC. AND CODE TIME PERIOD TO WHICH IT APPLIES.		<table border="1" style="display: inline-table; width: 100px; height: 30px;"><tr><td></td><td></td><td></td></tr></table>				<table border="1" style="display: inline-table; width: 100px; height: 30px;"><tr><td></td><td></td><td></td></tr></table>			
	Days	1	1						
	Weeks	2	2						
	Months	3	3						
	Years	4	4						
	Other (SPECIFY)	5	5						
		↓	↓						
5. Has the number of post-hospital office visits you provide for a/an (PROCEDURE) changed over the past five years?	Yes	1	1						
	No	2	2						
		↓	↓						
A. IF YES TO 5: How many (visits) did you provide then?	No. of Visits	<table border="1" style="display: inline-table; width: 60px; height: 30px;"><tr><td></td><td></td></tr></table>			<table border="1" style="display: inline-table; width: 60px; height: 30px;"><tr><td></td><td></td></tr></table>				



THIS PAGE IS INTENTIONALLY BLANK



This brings us to the end of the interview, doctor. Thank you very much for your time and cooperation.

Good-bye.

COMMENTS:

DATE:    /    /    /  
         MO   DAY   YR

TIME    

--	--	--	--

 AM  
ENDED 

--	--	--	--

 PM

INTERVIEWER ID:

--	--	--	--	--	--

INT. NAME: \_\_\_\_\_





APPENDIX B

PROCEDURES INCLUDED IN THE ANALYSIS  
OF MISPRICED PROCEDURES



TABLE B-1

## PROCEDURES INCLUDED IN THE ANALYSIS OF MISPRICED PROCEDURES

## ORTHOPEDIC SURGEONS

Initial comprehensive office visit for a new patient (CPT-4 90020)

Initial comprehensive hospital visit (with history and examination) for a new or established patient (CPT-4 90220)

Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)

Interpretation and report (only) for a spine X-ray--lumbosacral, anteroposterior, and lateral (CPT-4 72100)

Interpretation and report (only) for a complete hip X-ray--unilateral, with a minimum of two views (CPT-4 73510)

Simple hip arthroplasty (total hip replacement) (CPT-4 27130)

Secondary hip revision (CPT-4 27135)

Total knee replacement (CPT-4 27447)

Femoral fracture with internal fixation (CPT-4 27236)

Intertrochanteric or pertrochanteric femur fracture with internal fixation (CPT-4 27244)

Hemilaminectomy for excision of a herniated disk and/or decompression of a nerve root--lumbar unilateral (CPT-4 63030)

Major joint arthrocentesis (CPT-4 20610)

## UROLOGISTS

Initial comprehensive office visit for a new patient (CPT-4 90020)

Initial comprehensive hospital visit (with history and examination) for a new or established patient (CPT-4 90220)

Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)

Intravenous urography (pyelography) (CPT-4 74400)

Transurethral resection of the prostate (TURP) (CPT-4 52601)

Suprapubic prostatectomy (CPT-4 55821)

Lithotripsy (percutaneous nephrostolithotomy or pyelostolithotomy, up to 2 cm) (CPT-4 50080)

Cystourethroscopy (separate procedure) (CPT-4 52000)

Cystourethroscopy with ureteral catheterization (CPT-4 52005)

Cystourethroscopy with fulguration (including cryosurgery) and/or resection of small bladder tumor(s) (0.5 to 2 cm) (CPT-4 52234)

Dilation of urethra for a female patient (CPT-4 53660)



TABLE B-1 (continued)

## PROCEDURES INCLUDED IN THE ANALYSIS OF MISPRICED PROCEDURES

CARDIOVASCULAR/  
THORACIC SURGEONS

Initial comprehensive office visit for a new patient (CPT-4 90020)

Initial comprehensive hospital visit (with history and examination) for a new or established patient (CPT-4 90220)

Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)

Permanent pacemaker insertion--single chamber, ventricular (CPT-4 33207)

Permanent pacemaker insertion--dual chamber, AV sequential (CPT-4 33208)

Carotid thromboendarterectomy (CPT-4 35301)

3 artery CABG (coronary artery bypass graft) (CPT-4 33512)

4 artery CABG (coronary artery bypass graft) (CPT-4 33513)

Aortic valve replacement (CPT-4 33405)

Lung lobectomy (CPT-4 32480)

Swan-Ganz catheterization (CPT-4 93503)

Left heart catheterization, with selective coronary angiography and left ventricular angiography (CPT-4 93547)

Combined right and left heart catheterization with selective coronary angiography and left ventricular angiography (CPT-4 93549)

Insertion of an intra-aortic balloon catheter (CPT-4 93535)

## GENERAL SURGEONS

Initial comprehensive office visit for a new patient (CPT-4 90020)

Initial comprehensive hospital visit, with history and examination for a new or established patient (CPT-4 90220)

Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)

Permanent pacemaker insertion--dual chamber, AV sequential (CPT-4 33208)

Inguinal hernia repair (CPT-4 49505)

Carotid thromboendarterectomy (CPT-4 35301)

Partial colectomy (CPT-4 44140)

Modified radical mastectomy (CPT-4 19240)

Cholecystectomy with exploration of common duct (CPT-4 47610)

Cholecystectomy without common duct exploration (CPT-4 47600)

Excision of benign lesion on trunk, arms, or legs--1.0 to 2.0 cm (CPT-4 11402)

Excision of benign lesion on trunk, arms, or legs--3.0 to 2.0 cm (CPT-4 11404)

Diagnostic, complex upper GI endoscopy (including esophagus, stomach, and either the duodenum and/or the jejunum) (CPT-4 43235)

Total abdominal hysterectomy (CPT-4 58150)

Diagnostic, fiberoptic colonoscopy, 25 cm to splenic flexure (CPT-4 45360)

Diagnostic, flexible fiberoptic sigmoidoscopy (CPT-4 45330)

Diagnostic, fiberoptic colonoscopy, beyond the splenic flexure (CPT-4 45378)





TABLE B-1 (continued)

## PROCEDURES INCLUDED IN THE ANALYSIS OF MISPRICED PROCEDURES

OPHTHALMOLOGISTS	OBSTETRICIANS/GYNECOLOGISTS
Initial comprehensive office visit for a new patient (CPT-4 92004)	Initial comprehensive office visit for a new patient (CPT-4 90020)
Initial comprehensive hospital visit, with history and examination for a new or established patient (CPT-4 90220)	Initial comprehensive hospital visit (with history and examination for a new or established patient (CPT-4 90220)
Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)	Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)
Intracapsular lens extraction (CPT-4 66920)	Interpretation and report (only) for an abdominal ultrasound (CPT-4 76700)
Extracapsular lens extraction without IOL implant (CPT-4 66940)	Total abdominal hysterectomy (CPT-4 58150)
Extracapsular lens extraction with IOL implant (CPT-4 66984)	Vaginal hysterectomy (CPT-4 58260)
Insertion of an IOL subsequent to extraction (CPT-4 66985)	Vaginal hysterectomy with plastic repair (CPT-4 58265)
Fistulization of sclera (CPT-4 66170)	Diagnostic D & C (CPT-4 58120)
Vitreotomy, mechanical (CPT-4 67036)	Endometrial biopsy (CPT-4 58100)
Scleral buckling (CPT-4 67107)	Biopsy of cervix (CPT-4 57520)
Laser photocoagulation (CPT-4 67226)	
Ophthalmic biometry by ultrasound echography, A-mode (CTP-4 76516)	
Ophthalmic biometry by ultrasound echography; by B-scan and/or real time (CPT-4 76517)	
Serial tonometry with medical diagnostic evaluation (CPT-4 92100)	



TABLE B-1 (continued)

## PROCEDURES INCLUDED IN THE ANALYSIS OF MISPRICED PROCEDURES

NUEROSURGEONS	PLASTIC SURGEONS
Initial comprehensive office visit for a new patient (CPT-4 90020)	Initial comprehensive office visit for a new patient (CPT-4 90020)
Initial comprehensive hospital visit (with history and examination for a new or established patient (CPT-4 90220)	Initial comprehensive hospital visit, with history and examination for a new or established patient (CPT-4 90220)
Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)	Intermediate follow-up office visit for an established patient (CPT-90060)
Interpretation and report (only) for a spine X-ray--lumbosacral, anteroposterior and lateral (CPT-4 72100)	Initial comprehensive consultation (CPT-4 90620)
Interpretation and report (only) of a complete skull X-ray with a minimum of four views (CPT-4 70260)	Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)
Interpretation and report (only) for an EEG--awake, drowsy and asleep (CPT-4 95819)	Biopsy of skin, or subcutaneous tissue and/or mucous membrane (CPT-4 11100)
Carotid thromboendarterectomy (CPT-4 35301)	Excision of benign lesion on trunk, arms, or legs--1.0 to 2.0 cm (CPT-4 11402)
Hemilaminectomy for excision of a herniated disk and/or decompression of a nerve root--lumbar unilateral (CPT-4 63030)	Excision of benign lesion on trunk, arms, or legs--3.0 to 4.0 cm (CPT-4 11404)
Lumbar laminectomy for decompression of the spinal cord (CPT-4 63005)	Excision of benign lesion on face, ears, eyelids, nose, or lips--0.5 to 1.0 cm (CPT-4 11441)
Craniectomy or craniotomy for evacuation of a hematoma (CPT-4 61310)	Excision of benign lesion of face, ears, eyelids, nose, or lips--1.0 to 2.0 cm (CPT-4 11442)
Craniectomy for excision of a brain tumor--supratentorial (CPT-4 615100)	Destruction of facial lesion by any method including local anesthesia (CPT-4 17000)
Diagnostic lumbar puncture (CPT-4 62270)	Split graft of trunk, scalp, arms, legs, hands, or feet--up to 100 sq. cm (CPT-4 15100)
	Adjacent tissue transfer or rearrangement of eyelids, nose, ears, or lips--up to 10 sq. cm (CPT-4 14060)





TABLE B-1 (continued)

## PROCEDURES INCLUDED IN THE ANALYSIS OF MISPRICED PROCEDURES

EAR, NOSE, AND THROAT  
SPECIALISTS

Initial comprehensive office visit for  
a new patient (CPT-4 90020)

Initial comprehensive hospital visit,  
with history and examination for a new  
or established patient (CPT-4 90220)

Interpretation and report (only) for a  
chest X-ray with two views  
(CPT-4 71020)

Interpretation and report (only) for a  
complete sinus X-ray with a minimum of  
three views (CPT-4 70220)

Tympanoplasty (without mastoidectomy)  
(CPT-4 69631)

Tonsillectomy for patient under age 12  
(CPT-4 42825)

Planned tracheostomy (CPT-4 31600)

Diagnostic, flexible fiberoptic  
laryngoscopy (CPT-4 31575)

Operative laryngoscopy direct with  
biopsy (CPT-4 31535)

Control nasal hemorrhage-- anterior,  
complex, and unilateral (CPT-4 30903)

Basic comprehensive audiometry  
(CPT-4 92557)

GENERAL AND FAMILY  
PRACTITIONERS, AND  
INTERNISTS

Initial comprehensive office visit for  
a new patient (CPT-4 90020)

Initial comprehensive hospital visit  
(with history and examination) for a  
new or established patient  
(CPT-4 90220)

Intermediate follow-up office visit  
for an established patient  
(CPT-4 90060)

Intermediate follow-up hospital visit  
(CPT-4 90260)

Initial comprehensive consultation  
(CPT-4 90620)

Discharge hospital visit (on final day  
of a multiple-day stay) (CPT-4 90292)

Interpretation and report (only) for a  
chest X-ray with two views  
(CPT-4 71020)

Interpretation and report (only) for  
an ECG (electrocardiogram)  
(CPT-4 93010)

Diagnostic proctosigmoidoscopy  
(CPT-4 45300)

Diagnostic, flexible fiberoptic  
sigmoidoscopy (CPT-4 45330)

Diagnostic, fiberoptic colonoscopy 25  
cm to splenic flexure (CPT-4 45360)

Dignostic, complex upper GI endoscopy  
(including esophagus, stomach, and  
either the duodenun and/or the  
jejunum) (CPT-4 43235)

Upper GI endoscopy for biopsy  
(CPT-4 43239)





TABLE B-1 (continued)

## PROCEDURES INCLUDED IN THE ANALYSIS OF MISPRICED PROCEDURES

## CARDIOLOGISTS

Initial comprehensive office visit for a new patient (CPT-4 90020)

Initial comprehensive hospital visit, with history and examination for a new or established patient (CPT-4 90220)

Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)

Interpretation and report (only) for an ECG (electrocardiogram) (CPT-4 93010)

Permanent pacemaker insertion--single chamber, ventricular (CPT-4 33207)

Permanent pacemaker insertion--dual chamber, AV sequential (CPT-4 33208)

Swan-Ganz catheterization (CPT-4 93503)

Left heart catheterization, with selective coronary angiography and left ventricular angiography (CPT-4 93547)

Combined right and left heart catheterization with selective coronary angiography and left ventricular angiography (CPT-4 93549)

M-mode echocardiography (CPT-4 93300)

Real time echocardiography (CPT-4 93307)

Doppler echocardiography (CPT-4 93320)

## GASTROENTEROLOGISTS

Initial comprehensive office visit for a new patient (CPT-4 90020)

Initial comprehensive hospital visit, with history and examination for a new or established patient (CPT-4 90220)

Intermediate follow-up hospital visit (CPT-4 90260)

Initial comprehensive consultation (CPT-4 90620)

Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)

Interpretation and report (only) for an ECG (electrocardiogram) (CPT-4 93010)

Interpretation and report (only) for an abdominal ultrasound (CPT-4 76700)

Interpretation and report (only) for an upper GI series (CPT-4 74240)

Diagnostic proctosigmoidoscopy (CPT-4 45300)

Diagnostic flexible fiberoptic sigmoidoscopy (CPT-4 45330)

Diagnostic, fiberoptic colonoscopy, 25 cm to splenic flexure (CPT-4 45360)

Diagnostic, fiberoptic colonoscopy, beyond splenic flexure (CPT-4 45378)

Diagnostic upper GI endoscopy, complex, without biopsy (including the esophagus, stomach and either the duodenum and/or the jejunum) (CPT-4 43235)

Upper GI endoscopy for biopsy (CPT-4 43239)



TABLE B-1 (continued)

## PROCEDURES INCLUDED IN THE ANALYSIS OF MISPRICED PROCEDURES

NEUROLOGISTS	DERMATOLOGISTS
Initial comprehensive office visit for a new patient (CPT-4 90020)	Initial comprehensive office visit for a new patient (CPT-4 90020)
Initial comprehensive hospital visit, with history and examination for a new or established patient (CPT-4 90220)	Initial comprehensive hospital visit, with history and examination for a new or established patient (CPT-4 90220)
Initial comprehensive consultation (CPT-4 90620)	Intermediate follow-up office visit for an established patient (CPT-4 90060)
Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)	Initial comprehensive consultation (CPT-4 90620)
Interpretation and report (only) for a spine X-ray--lumbosacral, anteroposterior, and lateral (CPT-4 72100)	Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)
Interpretation and report (only) for an EEG--awake, drowsy, and asleep (CPT-4 95819)	Biopsy of skin, or subcutaneous tissue and/or mucous membrane (CPT-4 11100)
Interpretation and report (only) for a complete skull X-ray with a minimum of four views (CPT-4 70260)	Excision of benign lesion on trunk, arms, or legs--1.0 to 2.0 cm (CPT-4 11402)
Magnetic resonance imaging; brain (CPT-4 70550)	Excision of benign lesion on trunk, arms, or legs--3.0 to 4.0 cm (CPT-4 11404)
CAT scan of head without contrast (CPT-4 70450)	Excision of benign lesion on face, ears, eyelids, nose, or lips--0.5 to 1.0 cm (CPT-4 11441)
CAT scan of head with and without contrast (CPT-4 70470)	Excision of benign lesion of face, ears, eyelids, nose, or lips--1.0 to 2.0 cm (CPT-4 11442)
Diagnostic, lumbar puncture (LP) (CPT-4 62270)	Destruction of facial lesion by any method including local anesthesia (CPT-4 17000)
Nerve conduction, velocity, and/or latency study (motor) (CPT-4 95900)	
Electromyography of one extremity (CPT-4 95860)	





TABLE B-1 (continued)

## PROCEDURES INCLUDED IN THE ANALYSIS OF MISPRICED PROCEDURES

## RADIOLOGISTS

Interpretation and report (only) for a chest X-ray with a single view (CPT-4 71010)

Interpretation and report (only) for a chest X-ray with two views (CPT-4 71020)

Interpretation and report (only) of complete skull X-ray, with a minimum of four views (CPT-4 70260)

Interpretation and report (only) for a complete hip X-ray -- unilateral, with a minimum of two views (CPT-4 73510)

Interpretation and report (only) for a knee X-ray with two views (CPT-4 73560)

Interpretation and report (only) for a spine X-ray -- lumbosacral, anteroposterior, and lateral (CPT-4 72100)

Interpretation and report (only) for a complete sinus X-ray, with a minimum of 3 views (CPT-4 70220)

Interpretation and report (only) for a bilateral mammogram (CPT-4 76091)

Interpretation and report (only) for an upper GI series (CPT-4 74240)

Barium enema (CPT-4 74270)

Interpretation and report (only) for an oral contrast cholecystography (CPT-4 74290)

Intravenous urography (pyelography) (CPT-4 74400)

Interpretation and report (only) for an abdominal ultrasound (CPT-4 76700)

Ophthalmic biometry by A-mode ultrasound echography (CPT-4 76516)

Ophthalmic biometry by B-scan and/or real time ultrasound echography (CPT-4 76517)

Daily simple megavoltage treatment (CPT-4 77400)

Bone imaging of whole body (CPT-4 78306)

Cat scan of head, without contrast (CPT-4 70450)

Cat scan of head, with and without contrast (CPT-4 70470)

Cat scan of abdomen with contrast (CPT-4 74160)

Cat scan of abdomen with and without contrast (CPT-4 74170)

Magnetic resonance imaging of head (CPT-70550)





TABLE B-1 (continued)

## PROCEDURES INCLUDED IN THE ANALYSIS OF MISPRICED PROCEDURES

## ANESTHESIOLOGISTS

Interpretation and report (only) for a chest X-ray with two views  
(CPT-4 71020)

General anesthesia for a transurethral resection of the prostate (TURP)  
(CPT-4 52601)

Spinal block for a transurethral resection of prostate (TURP)  
(CPT-4 52601)

General anesthesia for a simple hip arthroplasty (total hip replacement)  
(CPT-4 27130)

General anesthesia for a secondary hip revision (CPT-4 27135)

General anesthesia for a femoral fracture with internal fixation  
(CPT-4 27236)

General anesthesia for a 3-artery CABG (coronary artery bypass graft)  
(CPT-4 33512)

General anesthesia for an aortic valve replacement (CPT-4 33405)

General anesthesia for an inguinal hernia repair (CPT-4 49505)

General anesthesia for a hemilaminectomy for excision of a herniated disk and/or decompression of a nerve root -- lumbar unilateral  
(CPT-4 63030)

General anesthesia for cholecystectomy with common duct exploration  
(CPT-4 47610)

General anesthesia for a suprapubic prostatectomy (CPT-4 55821)

Monitored anesthesia care for a lens extraction with IOL implant  
(CPT-4 66984)

General anesthesia for a total abdominal hysterectomy (CPT-4 58150)

General anesthesia for a vaginal hysterectomy (CPT-4 58260)

Spinal block for a vaginal hysterectomy (CPT-4 58260)

General anesthesia for a partial colectomy (CPT-4 44140)





CMS LIBRARY



3 8095 00012854 2



